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DR. ARMSTRONG'S

INTRODUCTORY ADDRESS TO A COURSE OF LECTURES

ON

Morbid Anatomy, and on the Nature and Treatment of Acute and Chronic Diseases.

Delivered on Friday the 1st of June, at the Medical School, Webb-street, Maze Pond.

Gentlemen,

The lectures which I now commence are intended to explain, not only the origin and prevention, but also the nature and treatment, of human maladies; and as all other branches of medical education are subservient to the practice of physic, in this Introductory Address I shall endeavour to show their mutual connexions.

Anatomy, Physiology, Pathology, and Therapeutics are parts of one indivisible system, and as such each should be studied in relation to the other, that they may all be distinctly understood and precisely applied. In the first place, an acquaintance with anatomy and physiology, or with the sound structures and functions of the body, is as needful to the medical practitioner as that of the conformation of a machine is to an artificer,—for without it he cannot detect the seat, he cannot find out the cause, of those deviations from the healthy state, abstractedly called disease, and consequently cannot correctly administer the requisite remedies. Hence much of the fallacy of the ancients is clearly referrible to their deficiency in this preliminary species of information. They did not, however, wholly disregard anatomy and physiology, notwithstanding the horror which generally existed of human dissection. Indeed almost all the arts and sciences might be traced to antiquity, the small and obscure source from which they arose, and they have gradually and at length greatly increased in their descent to us, by the conflux of innumerable streams of knowledge. Few departments of human research have been brought to any thing like perfection by one man, or during one age, but by many men and in the course of many ages. The astonished savage, who first saw the ocean heaving before him as with life, had no anticipation that posterity would, by successive discoveries, make the waves and the winds so subordinate to their purpose as to visit the remotest parts of the earth, to claim kindred with the inhabitant of every climate, and interchange the acquirements of the one and the productions of the other. Neither could the first uninformed observers of animal organisation have foreseen the ultimate advancement, the vast and varied application of anatomy in geology, in natural religion, in painting and sculpture, but above all in the theory and practice of physic; yet some of the most rude nations have taken a deep interest in anatomy and physiology, as was exhibited by Omai, who was brought from Otaheite to this country, and who, on being introduced into the Hunterian Museum, showed a surprising acquaintance with some of its contents. In the first ages of the world, the slaughter of animals to supply their wants, and likewise their own injuries, would almost daily call the attention even of Savages to the subject. From the earliest epoch, too, man must have been sensible of his own weakness compared to the stupendous powers of nature, and must have felt his dependance. Among the means used to propitiate the Supreme Being, the sacrifice of living things was one of the most remarkable, and when the patriarchs ceased to perform that office, and the priesthood became a separate order, it formed a still more material and important part of religion, especially with the Egyptians, who obtained some knowledge of anatomy, not only by this mode, but by the embalming of human bodies, and by exhibiting the human skeleton, as a *memento mori*, at their feasts. Homer and Hesiod were supposed to have fixed the religion of their countrymen; but while the Greeks borrowed the superstition, they improved the science of the Egyptians. The ancestors of Hippocrates were particularly devoted to the study of physic; and we find, in an oration of Isocrates, that Nebros, from

whom Hippocrates descended, was held in such high estimation by the state, as to have been consulted on one occasion, when he did not hesitate, such were the degraded morals of the times, to poison the water by which a besieged city was supplied, in order to hasten its surrender. As Socrates was said to have brought philosophy from heaven to earth, by rendering it familiar to the minds of men, so Hippocrates separated physic from priestcraft, and thus conferred a great benefit upon the world.—Among other parts of medicine, he studied anatomy and physiology, as much as the prejudices of his age would allow, and had many admirers and successors, among the most conspicuous of whom was Galen, a man of universal genius, who considered his discourses on anatomy and physiology as a hymn more acceptable than any kind of sacrifice, since they displayed the wisdom and the power and the goodness of the Deity. But shortly after Galen's time the dark ages supervened, and mankind walked, like so many shadows, in the gloom of ignorance, till the light of Greek and Roman genius emerged a second time, and then the remains of knowledge, and the monuments of art, and the aspect of nature, were all restored, and by their impressions of beauty and sublimity excited men to emulate, and even to surpass, in some important points, the master intellects of remote ages. The revival of literature not only presented many objects, but gave a new impulse to the human mind, so that letters, science, and the fine arts had numerous pupils and patrons. Among other subjects, anatomy and physiology were successfully cultivated. One discovery suggested and followed another, till both have been far advanced in every department of demonstration.

Anatomy should be studied on the dead, physiology on the living body; or, rather, they should be conjointly studied. For instance, an examination of the urinary apparatus after death, with the consideration of the secretion during life, at once displays the appropriate structure and the correspondent function. In conducting our inquiries from organ to organ, if any uncertainty should arise, we refer to comparative anatomy. Thus, if we form an opinion respecting the office of a part, the absence or presence of that part, traced through a series of the lower animals, tends to confirm or refute that opinion; besides, by comparing the most simple with the most complicated organisations, we ascertain the varieties of structure and the modification of function. But human and comparative sound anatomy are not always sufficiently illustrative, and then we must have recourse to morbid anatomy, since, from the disturbance caused by disease, we may sometimes infer the function during health; as for instance, the power which the lungs have in assisting to change the black into red blood. If all these expedients fail, we have the choice of remaining in ignorance, or of trying experiments. For the gratification of appetite, we multiply and destroy many living creatures, nay, some persons do this for amusement, as in shooting and hunting. This being the case, we may surely now and then endeavour to extort the secrets from nature by experiments on animals, in order to mitigate or prevent human misery; but nothing less than such an object can authorise us to inflict suffering even upon them, to invade, as it were, the very sanctuary of life, and rudely rend the veil by which its mysteries are concealed from our view. The viscera and their operations are hidden during life, but by experiment they are disclosed. Galen, by experiment, proved that an artery contained blood, contrary to the opinion of his contemporaries—Harvey, by experiment, discovered and demonstrated the circulation of the blood—Bell and Magendie, by experiment, have thrown considerable light upon the offices of the nerves: in weighing, therefore, the evil and the good, public utility authorises us, on proper occasions, to use experiments, that we may attain a competent knowledge of anatomy and physiology, the only solid basis on which medical science can rest at present, or be raised in future. It were almost superfluous to add, that these subjects are admirably well taught in this school by Mr. Grainger, who is highly and deservedly esteemed as an anatomist and a physiologist.

The human body is composed of different organs, performing different functions, but all of which concur in the grand purpose of maintaining life. These functions are divisible into three orders, namely, the mechanical, the chemical, and the vital. We have an example of the mechanical in the vascular system, in which the blood circulates, partly by the elasticity and contractility of the vessels themselves, but principally by the forcing power of the heart; for on dividing one of the veins of the lower extremities, and inserting a tube, Dr. Hales found, that the blood rose in it above the level of the heart, an experiment which seems to show, not only that the circulation of venous blood is independent of respiration, but chiefly dependent upon the action of the heart. Of the chemical functions, we have an example in the blood itself, which is replenished and renovated through the instrumentalities of digestion and respiration, and which, among other results, performs the work of nutrition by deposits of various kinds, made with such constant regularity, that we need not be surprised at Hippocrates, Galen, and Stahl, referring

this function at once to the influence of a presiding intelligence. The vital functions are apparently most displayed through the nervous and muscular system; but it is an observation as old as the lawgiver of the Jews, that the blood is possessed of a vital principle, and Galen supposed, that this class of functions was derived from a fluid elaborated through the blood. It is known, that the shock of a torpedo is produced by electricity, separated from nerves, seemingly appropriated to that end; it is also known, that if the eighth pair of nerves be divided, digestion is stopped, but that it can be carried on for a time by the application of galvanism; facts which appear to show, that the nerves are probably conductors of some subtle energy, and that this energy is connected with the condition of the blood, there can, I think, be no doubt. In those extreme cases of specific inflammation of the mucous membrane of the air passages attendant on typhus fever, there is a sticky secretion besmeared over that membrane, so that the venous blood presented there to the atmosphere, is not duly changed into arterial blood, as happens in the healthy condition. The consequence is, that black blood is returned to the left chamber of the heart, and thence circulates through the arteries. Now whenever this occurs to any considerable degree, the nervous and muscular power invariably fails, and is as invariably restored when the affection of the air passages is so far removed as to allow the air inhaled to come freely in contact with the blood, changing it from the venous into the arterial state; so that it may be fairly inferred, that the maintenance of nervous and muscular power is dependant upon the circulation of decarbonised or red arterial blood. Indeed, I could adduce other facts in support of this opinion, from the operation of certain poisons on the blood, but shall more particularly allude to them in another part of this course of Lectures. The before-mentioned mechanical, chemical, and vital functions are so mutually related, that the one cannot be properly exercised without the other. The harmony of all these functions constitutes what is called health; their disturbance always is the concomitant of disease; but as function is only the work which an organ performs, so the disturbance of this function necessarily implies some change in the organ itself, or rather in some of the textures of which it is composed. The questions then naturally occur, how does this disturbance arise? What are its signs and nature? These queries lead me to the consideration of the third part of my subject, namely, pathology, which might be defined, an exposition of the symptoms and their causes.

Pathology includes three important points, predisposition, occasion, and disease; to each of which I shall next briefly direct your attention. The doctrine of predisposition, or the liability to disease, was not entirely unknown to the ancients, for it is a subject which must have forced itself perpetually upon the observation of intelligent men. Demosthenes, in one of his orations, encourages the Athenians by telling them, that though Philip may seem strong now that he is prosperous, yet let him but once receive a check from their valour, and all his weak parts will be displayed, as we see in the human body when it receives a shock. Celsus makes many allusions to this doctrine, and particularly asserts, that when the stomach is disordered, the weak parts are sure to suffer the most; an assertion upon which a modern theory has been founded, and blended with many unsatisfactory conjectures. Lord Bacon had the surprising sagacity to perceive, that there was one department of anatomy which yet remained uncultivated, what he calls comparative human anatomy; and it is highly probable, that if his hint were attended to, if the different organs and textures of different individuals were carefully compared, considerable light might be thrown upon the latent tendencies to disease, since there is a far greater uniformity in the structure of the internal, than of the external parts of the body, and since, in all probability, the differences in the conformation of the latter, predispose powerfully to different affections in the same or in different families. For instance, if in comparative human anatomy we were to examine the heart in a great many subjects, we should find remarkable differences in its size as a whole, in the relations of the size of the auricles or ventricles, in the thickness or in the thinness of its walls, and in the firmness or flabbiness of its fibres, and upon these discrepancies would depend several important modifications of disease, if the history of the respective cases were accurately traced from their origin to their end. Let me, therefore, recommend you seriously to reflect upon the suggestion of Bacon, and to prosecute comparative human anatomy with an assiduity proportionate to its great importance in pathology. It is truly remarkable how little attention medical men have paid to the doctrine of predisposition, considering that poets and philosophers have been so fully aware of its influence in the production, not only of maladies, but of mental peculiarities. Pope's father was crooked, and his mother was liable to headaches, both of which infirmities he inherited, and to which, in one of his satires, he has adverted with that playfulness of wit and tenderness of affection which were, notwithstanding the acrimony of his biographer

Johnson, such conspicuous attributes of his character:

> "But friend, that form which you and Cuill so much admire,
> Came not from Ammon's son, but from my sire;
> And for my head, if you'll the truth excuse,
> I had it from my mother, not the Muse;
> Happy if he, in whom these frailties join'd,
> Had heir'd as well the virtues of the mind."

Dr. Johnson's life, it is well known, was a struggle under the load of an oppressive melancholy, which he derived from his father; and in this course of Lectures I shall bring forward many facts to prove the great utility of being aware of hereditary predisposition, which varies much in different families with respect both to bodily ailments and mental temperaments. But predisposition is not merely hereditary, for it is connected with certain peculiarities of structure, the attendants only of different ages; it is connected also with certain peculiarities of sex; and, lastly, it is acquired from pernicious habits or previous disorders, as shall be afterwards amply illustrated by a detail of cases. In regard to what I call occasion, it is that remote agency or circumstance by which disease is induced. Now in this sense of the word, occasion is either common or peculiar; a peculiar occasion being distinguished from a common one by some inherent and specific property. The common occasions are the ordinary agents of nature which surround us, and if arranged according to their effects upon the body, might be denominated depressants, stimulants, irritants, and interruptants. The peculiar occasions are putrid matter animal or vegetable, certain atmospheric distemperatures, the specific contagions, together with animal, vegetable, and mineral poisons. Many similar effects flow from the common and the peculiar occasions; but the latter have specific effects upon the blood unknown in the former, and these effects require to be well understood, as they modify the pathology and the treatment of disease. A knowledge of the doctrine of predispositions and occasions is extremely useful, inasmuch as it enables us very frequently to prevent the occurrence of many morbid affections; and as this is a portion of medicine which might be made perfectly intelligible to the public, I shall probably at some future period write an essay upon it; but in the mean time, I shall often have occasion in these Lectures to point out to you the instances of its application.

What has been denominated occasion, especially when favoured by predisposition, produces that complex state expressed by the abstract term disease, which essentially consists in some deviation from the natura condition of the solids, or of the fluids, or of both these at the same time. There are manifest agreements and disagreements in the appearances of disease, and hence the origin of theory. But Celsus remarks, that the practice preceded the theory of physic; and this must necessarily have been the case, since men would instinctively attempt to assuage suffering, before they began to speculate about its abstract nature. Theory, however, must soon have been grafted on practice, from that intuitive tendency in the human mind to refer phenomena to causes. Pathology is only a portion of natural science; and natural science is the observation of facts, out of which legitimate principles are deduced. But it is most lamentable to look back to remote times, and to consider how many centuries were wasted by the vain and unprofitable speculations of our ancestors, who, as Bacon justly observes, sought for truth, not in the great world without them, but within their own little minds. It must be confessed, that natural science, in most of its ramifications, was strangely misconceived by the ancients, who misapplied their talents in vague conjectures, instead of employing themselves in the business of impartial observation. The mind of Bacon travelled like an illuminating ray through time and space, and he has remarked, that he only found one man who studied physic in the right way, and that man was Hippocrates. He showed his superiority by observing facts, and by contending that diseases did not arise, as was then supposed, directly from the gods, but from secondary or natural causes. But such is the love of the marvellous in the human mind, that a modification of the old doctrine prevailed during the dark ages, when the heathen divinities were supposed to be real existences; in short, evil spirits, who continued to exercise, as Milton has poetically described in his Paradise Lost, a baneful influence upon mankind. Even Luther, to whom the world is so greatly indebted for the reformation, was so imbued with such opinions, that he expressed his surprise men should busy themselves in searching after the origin of diseases, since they all clearly arose from the arts of the devil. Thus, the fatalism in some ages of the world, and the fanaticism in others were alike unfavourable to the advancement of physic, for they both precluded observation; and even when they ceased, now and then, to operate, their place was generally supplied by some false hypothesis, borrowed from the predominent philosophy of the day. We are apt to hear from men, who have consumed many years in the acquisition of mere verbal learning, a great deal about the *wisdom* of our ancestors; but they should erase that word, and write *weakness* in its stead, since the ancients, for the most part,

mistook the plan of investigation, and knew little or nothing, comparatively speaking, concerning those great practical arts and sciences, which more immediately relate to the business of life. As well might we look to the ancients for a knowledge of chemistry as for that of medicine; for both are only to be found, rightly exhibited, as the offspring of a modern epoch, in which men turning aside from the follies of scholastic learning, and speculative subtlety, have employed the powers which God gave them, in exploring the phenomena and the laws of all created things.

In the progress of the medical art, Sydenham appears to have been the first who threw out a hint, that diseases might be arranged, like plants, from their external characters; and this hint was acted upon by Sauvages, Vogel, Linnæus, and Cullen, the last of whom published a nosological work, which, like Aaron's serpent, swallowed up all the rest. As morbid anatomy, however, was in a great measure disregarded under this systematic arrangement, ample space was of course left for speculation, and consequently, we find that the causes of disease are mostly conjectured from a superficial survey of their signs. But truth is not to be found upon the surface of things. It is like the pearl in the ocean, which only can be got at by diving to the bottom. Morgagni may be regarded as the father of modern medicine, for he first most distinctly showed its true connexion with sound and morbid anatomy. Indeed, the application of morbid anatony to pathology, constitutes the greatest era in the history of physic, and is the principal cause of most of our recent improvements; for it not only removes the erroneous opinions respecting the nature of diseases formed by our predecessors, but it reveals the causes or conditions upon which most of the symptoms depend, and thus enables us closely to approximate towards first principles. The opinions of men ignorant of morbid anatomy are mere conjectures as to the nature of disease; whereas, on the contrary, the opinions of men properly acquainted with morbid anatomy, are actual demonstrations; and as we always act upon opinions, as the practice is founded upon the theory formed, hence the superiority of the morbid anatomist over the crude nosologist; the first being literally a scientific practitioner, as he is guided by correct principles, the last a daring and dangerous empiric, guided only by conjectures. Morbid anatomy, however, should never be abstractedly considered, for then it would be only a catalogue of diseased appearances. Its true value lies in its intimate connexion with the symptoms. The theory thus deduced, I mean from the circumstantial evidence of the symptoms, in conjunction with the positive evidence displayed by dissection, is not an occult science, but a simple and beautiful part of inductive philosophy, which unfolds causes and effects. But, though we are so far raised above our predecessors in knowledge,—though we stand upon the eminence of ages, and look down upon antiquity dimmed and diminished by the immensity of its distance, yet our progression has not been sufficient to enable us to present a system complete in all its parts; yet it is useful to collect, arrange, and exhibit what is known, because classification facilitates both the communication and the acquisition of knowledge. In the diagnosis of diseases, we must constantly attend to the symptoms; but in the classification we must chiefly regard their natural affinities. Taking then the internal conditions and the external symptoms in conjunction, diseases might be divided into two great classes, namely, acute and chronic, and each of these again into a few orders agreeably to their natural relations. Almost all the various phenomena of acute affections are referrible to congestive fever, simple fever, and inflammatory fever, each of these varieties having its proper symptoms and conditions, whether proceeding from common or peculiar occasions; but when from the latter, certain changes take place in the blood, as shall be afterwards shown, which do not occur from common occasions, and which require to be taken into account in conducting the treatment. The doctrine of a congestive, simple, and inflammatory variety of fever, is not matter of mere opinion, but of demonstration, as will be proved by a subsequent detail of facts. The visible qualities in the chemical world are very numerous, yet they are traceable to a few simple laws; and so it is with acute affections, the symptoms of which are multiform, but the internal conditions which give rise to them are few and regular, and these being once understood, they explain all the diversities of the former, as the law of gravitation explains the various movements of the heavenly bodies. The division of affections into acute and chronic, is written upon the face of nature. The general line of demarkation between them is the presence of fever in the one, and the absence of it in the other class; but, it sometimes happens, that acute and chronic affections pass and repass into each other, as might be instanced by the various degrees and extent of that condition called inflammation. All chronic affections, like acute ones, are resolvable, as far as our information has extended, into a few simple elements or states. Plethora, general or local; inflammation, seated in different textures; some changes in the qualities, or in the secretions, of the blood; adventitious formations, such as tubercles, scirrhous and fungous tumours;

the presence of living beings in the body; and lastly, certain nervous disorders connected with the blood in its constitution, quantity, or distribution, make up, pathologically, the principal conditions to which the phenomena of chronic affections might be referred. These conditions sometimes exist separately, but, occasionally, they are so combined, that a chronic disease might be compared to a chain of several links, each of which is supported by smaller chains, so that the removal of the first link could no more effect its dissolution than the removal of the middle or last link, and which indeed could only be effected by the removal of each particular link. Still, however, as a general principle, it may be correctly stated, that some local faultiness of the solids, or some latent one of the fluids, is the cause on which the symptoms of chronic disease depend.

From what has been said then, it will appear, that while sound anatomy and physiology reveal the healthy conditions and their indications, morbid anatomy and pathology reveal the unsound conditions of the various textures, and the symptoms by which they are indicated. It must be evident, therefore, that a knowledge of sound anatomy and physiology is necessary, for they constitute the rudiments of medical science; but, it also must be equally manifest that in the work of education, a minute attention to the symptoms, and to the morbid appearances displayed by dissection, should be superadded, to enable us to form precise opinions respecting the nature of disease. Let me, once for all, strongly recommend to you the study of anatomy, without which, you cannot advance a step safely to yourselves or your patients. In every fatal case, where a doubt exists on your minds as to the cause of death, examine, if possible, the body with the greatest care. If you do not proceed upon this plan uniformly, consider how criminal you must become from remaining in voluntary ignorance; for as a case of this kind, unexamined through your own neglect, may represent a class of similar cases, the same doubt must exist in your minds, and will be the cause of many other failures,—will be the cause of your carrying destruction to families whose confidence you have obtained. On the other hand, those relations of the deceased who refuse the medical attendant an examination of the body, in a doubtful case, violate one of the most sacred duties which they owe to society; for as that refusal leaves the practitioner in ignorance, when it is needful he should be fully informed, so he fails from their refusal in similar cases, and thus they inflict the agonies of grief which they themselves had sustained, upon others. If medical men and the public would look at the subject in this point of view, the former would perceive the propriety of requesting, and the latter of complying, with such examinations. But, I may now remark, that the several departments of elementary information already alluded to, are all preparatory to the fourth and last, namely, Therapeutics, under which are comprised all the remedies employed, and the rules of their administration, concerning which a few observations will now be made.

The first efforts of mankind would be to procure the means of subsistence, the next to remove uneasiness; and out of these two instinctive actions arose the arts and sciences, which are our instruments of defence against the hostile elements surrounding us. As the love of life, and our sympathy in the sufferings of others, are the predominant feelings, we need not wonder that in the lapse of ages all the kingdoms of nature should have been ransacked for remedies, the whole of which however might be arranged under six classes: 1st. Diet and drink; 2dly. Temperature and air; 3dly. Exercise and rest; 4thly. Mental impressions; 5thly. External applications; and, lastly, Medicines internally administered: and as all these are separately or combinedly employed in the practice of physic, I shall briefly endeavour to show some of the bearings of each class, in the order just mentioned.

Instinct must have originally directed man in the choice of his diet and drink, and the experience of their effects would guide him in their future selection. The same principle would influence him in disease. We accordingly find, as an exemplification of this remark, that in ardent fever, water is the *dieta magna* of all nations, if we may use an expression of the Italians. But instinct is not invariably a safe monitor. Shakspeare makes Coriolanus say truly, in addressing the Roman mob, "Your affections are a sick man's appetite, which most desires what would increase the evil." Thus, for instance, patients, in the most inflammatory fevers, sometimes long for wine, and even spirits, and sometimes for rich food; which, if given, would be highly injurious. Independently of the mischief which would occasionally result from erroneous instincts, analogy has been a fruitful source of error in all ages. The weakness which is produced by over-exertion in health, is removed by a generous diet; and that being the case, the same rule of regimen was extended by analogy to the debility attendant upon febrile affections; but here the analogy is altogether deceptive; for the debility produced in health by over exertion is simple, whereas the debility attendant upon febrile affections is the effect of the disorder, which a generous diet aggravates. It must be allowed, however, that the an-

cients paid so considerable an attention to diet, that they made it one of the grand divisions of physic; and it is so important in acute and chronic affections, that success perpetually depends upon the right regulation of the quality and quantity of the diet; yet we have no occasion for volumes upon the subject, for all that is known respecting it may be reduced to a few simple rules, which shall be afterwards explained.

The employment of temperature and air would arise from their sensible effects. The unpleasant impressions of a low temperature would lead not only to the invention of clothing and architecture, but to the use of fire and warm bathing; while an uncomfortably high temperature would induce the sufferer to seek the shade, to expose himself to the refreshing breeze, or to apply the effusions of cold water. Thus, in process of time, the application of temperature, regulated according to circumstances, would become a part of the practice of physic, as all early history demonstrates. As to air, its influence would soon be noticed, in conjunction with that of the soil and water, from the fact that some places are sickly, and others salubrious; and, consequently, we find that the most ancient temples, in point of situation, were asylums of health, where the patents enjoyed the advantages of a wholesome regimen and a pure atmosphere. Men are like plants, affected not simply by air, but even by the light. The American tribes who inhabit the woods, are paler than those who inhabit the plains; and a like contrast is observable between the inhabitants of crowded cities and open country. Moreover, there is a most remarkable difference between damp and dry air; the spirits being oppressed by the one, and so lightened by the other, that we feel, under its influence, almost as if we could bound from the earth like a ball. Independently of such conditions, there are contaminations of atmosphere so pernicious, especially one, relating to houses, hospitals, prisons, ships, camps, cities, and countries, that it seems most strange governments never should have instituted an inquiry into the causes of its formation, and the means of its correction. From the time of Sir Christopher Wren, owing to the improvement of paving and draining, there has been a considerable diminution in the number of cases of that specific fever now termed typhus, which arises, not as is generally supposed, from human contagion, but from putrid animal or vegetable matter given off in the form of an exhalation from certain parts of the earth. In some parts of London, and especially of the surrounding country, the materials out of which this putrid matter issues are still allowed to accumulate so abundantly, that examples of typhus fever are continually occurring from this cause. Most persons tremble to come in contact with a patient labouring under typhus fever, from the dread inspired by the fatal, and, I believe, the false doctrine of its contagious nature; while, from their ignorance of its true origin, they allow their houses or grounds to be tainted by that putrid effluvium, from which, according to my observations, it invariably proceeds. But to return to the subject of atmosphere, as a remedial agency, we perceive the great advantages of fresh air in specific fevers, whether derived from malaria or from contagious sources; such fevers, for example, being generally much milder among the poor who live in garrets, where the air circulates freely, than among those who reside in cellars, where the air is stagnant. Besides, in those chronic affections, where the skin and internal mucous membranes are out of order, a fresh atmosphere, aided by warm bathing, is a far better remedy than is imagined by those persons who are incessantly taking this or that drug, under the erroneous supposition that every thing is to be done by mere medical prescription. Indeed, as pure atmosphere is the pabulum vitæ required every moment, so its influence is great, not only in the preservation of health, but in the removal of disease.

Rest and exercise must have been tried early as expedients of relief. The savage lives in the extremes of action and repose, and therefore the advantages and disadvantages of both were soon experienced. Excessive exertion would occasionally induce fever, and that again would incline the sick to remain at rest; and when the fever disappeared, instinct would prompt the convalescent to moderate exertion, in order to restore the strength. As exercise increases, and rest diminishes the force and frequency of the pulse, they are among the most efficacious means of management, especially in febrile cases, and also in chronic ones, where the heart is concerned. Moreover, as there can be no high degree of strength without exercise, it is of the greatest consequence in invigorating the body and preserving the health, a circumstance to which the ancient Greeks and Romans particularly attended, in their system of physical training. A similar system was established in our army by the late Duke of York, the good effects of which are very conspicuous in the robust appearance of our soldiers. But though exercise of a natural kind daily in the open air, be one of the best preservatives of the health, yet the modern gymnastics now in vogue in the Metropolis, are carried by some persons to such an extreme of violent exertion, as to be exceedingly injurious, by inducing hernia, hæmorrhage,

and affections of the heart, or large adjacent vessels.

With respect to mental impressions, they were resorted to medically from the remotest of times. The ancient priests had an interest in maintaining, that all diseases proceeded directly from the gods, for then they became the medium of communication; and having the fate of their patients in their hands, they acquired what they wanted—power and riches, by officiating in the mummeries of sacrifices and omens and prophecies. Cicero wondered that two of such priests could look each other in the face without laughing. But the wonder is that a man so accomplished could have made a remark so puerile, for they were trained actors; it was their business to appear in the drama of deception, and they were bound to play their parts with consistency, "to strut and fret their hour upon the stage" like Kean, Kemble, or any other celebrated performer. When we consider the gross ignorance and credulity which prevailed in antiquity, we cannot be surprised that the multitude should have been the dupes of impostors, or the followers of visionaries; and though, in this happy country at least, the progress of knowledge has broken the spell of superstition, though the travelling valetudinarian no longer visit shrine after shrine, nor the bedridden patient possess himself of relic after relic,—though all such delusions have vanished like phantoms before the dawn of philosophy; yet there is still the same necessity for administering to the mind in sickness. Under all circumstances, man is a poor and pitiable being, when stricken down by disease. Sickened and subdued, his very lineaments have a voice which calls for commiseration and assistance. Celsus says, that knowing two physicians equally intelligent, he should prefer the one who was his friend; for the obvious reason that he would feel a deeper interest in his welfare. Kindness composes, and harshness disturbs the mind, and each produces correspondent effects upon the body. A tone, a look, may save or destroy life in extremely delicate cases. Whatever may be the prognosis given to friends, in all febrile cases the most confident and consoling language about the ultimate recovery should be used to the sick, as prophecies not unfrequently contribute to bring about the event foretold, by making people feel or think or act, differently from what they otherwise would have done. Again, in chronic cases, as time is required for their cure, by explaining to the patient this fact, we maintain his confidence, we keep his mind easy, and thus gain a fair opportunity for the operation of regimen or remedies; in short, the judicious physician, like the Roman general, Fabius, conquers through delay, by cutting off the supplies, and wearing out the strength of the enemy. In large cities, where the mind is so much overwrought in the various schemes of private ambition, or of public business, anxiety is very frequently the grand opposing circumstance to recovery; so that while the causes which produced it are allowed to operate, mere medical prescription is of no avail. The effects of this anxiety are visible in the pallid face and wasted body. But if the patient be possessed of philosophy enough to forego his harassing pursuits; if he have not, from the contact and cares of the world, lost his relish for the simple and sublime scenes of Nature, a removal into the country is of the utmost efficacy. The deformity and conflict of the moral world are exchanged for the beauty and calm of the physical world; and surrounded by all the poetry of earth and heaven, the mind regains its peace, and the health, as if by magic, is perfectly restored.

External applications were the earliest measures of the primitive ages. The first practitioners were surgeons. Man is naturally a pugnacious animal, for the majority of savages fall in battle. To restrain the effusion of blood would be the first instinctive effort, and that in time led to the application of the bandage, mixed up with the superstitious observances of ignorance.—When Ulysses was wounded, the part was nicely bound up, as if the principle of healing by the first intention had been well understood; but the application was accompanied by certain incantations, which soon formed a part of the mystery of the art, and which in different countries, and in different rude ages, were remarkably similar, so that Scott, in his admirable novel of Waverly, has shown his knowledge of nature in describing the manner in which his wounded hero was treated, after the fashion of Ulysses, by one of the surgical seers in the Highlands. The Abyssinians, it is well known, have been in the habit, time immemorial, of cutting portions of flesh out of living animals, and so uniting the divided surfaces that they heal by the first intention. The knowledge of this natural operation was not unknown to Celsus, though it was overlooked in his writings for ages; surgeons having seared the cut parts, to prevent hæmorrhage, by hot irons, instead of using the ligature, which he recommends, and which is now universally adopted.—Spontaneous hæmorrhage, or that attendant upon accidents, would be occasionally found beneficial to persons who happened to be sick at the time, and such an effect would naturally lead to the application of bloodletting in apparently similar cases. In plethoric affections, blood often flows naturally from the nose, and it is a remarkable fact,

that one of the most ancient modes of abstracting blood artificially was by the introduction of a sharp instrument up the nostrils. In almost all savage nations, suction was applied to poisoned wounds, as Homer describes Machaon to have done in the case of Menelaus; and suction would, by increasing the flow of blood, suggest the application of cupping. The casual contact of leeches and irritating matters to the skin, unquestionably gave rise to the employment of leeching and blisters, and burns became the means of introducing the cautery; for it is the property of reason to turn the adverse incidents of the present into the occasions of future advantage.

The administration of medicines internally was originally the result of chance. Man is led first by instinct, and next by experience, to a considerable change of diet. Among the successive trials of different articles of aliment, some would prove emetic, purgative, diuretic, sudorific, stimulant, and narcotic, and each of these classes of agents would be occasionally employed; for in savage tribes, when one mean fails to alleviate disease, another and another are successively tried. The discovery, real or supposed, would be communicated from one to a tribe, and finally from tribes to the whole country, and, as civilization advanced, to different countries, through the established commerce. In this way drugs have been greatly multiplied, two valuable ones, bark and ipecacuanha, having been introduced, as it were, recently from the new world. On the whole, vegetable remedies prevailed in the ancient world, and the use of them was established for centuries through the power of Galen; but as Vesalius shook the authority of Galen in Anatomy, so Paracelsus disputed it in Therapeutics, by the asserted superiority of some mineral agents. Even the study of Alchemy tended to increase the number of the articles of materia medica; for visionary as its objects unquestionably were, yet the experiments to which it gave rise led to the junction of mineral and vegetable remedies, and paved the way to modern chemistry, by which physiology and pathology have been improved, but more especially pharmacy, in relation to the proximate and ultimate principles of medicines, the laws of their combinations, and the modes of preserving and compounding them. The genius of Linnæus, too, and the labours of his followers, have made Botany an useful auxiliary, by the substitution of precise characters in plants to the loose descriptions of the ancients. What botany has thus done for the vegetable world, Chemistry has also done for the mineral, so that posterity will be at no loss to recognise all the remedies now in use; and as the press preserves all that is useful in literature and science, we may reasonably hope that our character, as intellectual beings, will yet be considerably improved, and our moral and corporeal infirmities proportionably diminished.

From the imperfect hints already thrown out, it may be inferred that therapeutics is one of the weightiest branches, which consists of two parts, first, the history, preparation, pharmaceutical relations, and general effects of remedies; secondly, the application of particular remedies to particular affections. The first part is taught separately, under the name of Materia Medica, respecting which you will find the lectures of my friend Dr. Boott highly useful, for his are not the common-place lectures frequently delivered on the subject, but the valuable productions of an intellect of the first order, enriched as well by all the best acquirements of the medical art as by those of general science and literature. The second part of therapeutics, or that which appertains to the practical application of particular affections, belongs properly to this course, and will consist of an exposition of those particulars which have fallen under my own observation, or those principles which have been deducted from my own experience. Drs. Duncan, Murray, and Thomson have done much in presenting us with an excellent history of the various articles of which our materia medica is composed; but we have no book wherein the application of remedies is laid down with any thing like precision in regard to the removal of those pathological conditions which stand in the character of causes to the symptoms. There is no natural relation between remedies and diseases, but medical men have attempted to create one, either from speculations or from facts, and therefore this relation must be either false or true. Now most of the relations attempted in former times are false, because the authors were guided by conjectures as to the conditions on which the symptoms depended; or they prescribed for the symptoms themselves without a reference to their real cause. As conjectures, God knows, have been superabundant, and as symptoms are extremely numerous, we have an extraordinary accumulation of recipes of all descriptions. Well might Sydenham exclaim, that the materia medica of his time was like an assemblage of trees bearing many leaves but little fruit, and the comparison is really applicable to the materia medica of the present day; for what experienced man, of common sense, can consider the many syrups, tinctures, infusions, decoctions, confections, electuaries, and pills, of the pharmacopœias, without regarding such works as the repositories of much of the fallacy of the monkish ages? How many useless—how many pernicious

things, pass under the name of medicines, and how few agents are required by men who have studied physic upon right principles? because they prescribe not nostrums for conjectures, expressed by an abstract name, not formulæ for mere symptoms, but means for real causes, which are few and simple, and which give rise to all those varied signs, so puzzling to men who have been educated in all the elaborate and useless and hurtful dogmas and doctrines of some antiquated establishments, so far behind the age, that the light of an improved science has yet to enter and dissipate their darkness. As the opinion which we form of the nature of a disease must be true or untrue, and as the treatment is founded upon that opinion, hence arises the absolute necessity of possessing correct principles of pathology, that dogmatism may be avoided on the one hand and empiricism on the other; or rather, that we may avoid a series of hazardous experiments on the health and lives of confiding patients, ignorant of the imperfections of the professors of an art, which has been too long concealed under a language almost as incomprehensible, to common minds, as the hieroglyphics of the ancient Egyptians; yet all that is really known, in modern medicine, might be expressed in a few plain English words, the rest being merely verbiage, a part of the mummery and mystery of scholastic and collegiate sophistry. Indeed, no part of human knowledge has been, till recently, kept so completely concealed from the public view as medicine, and this is the reason why some of its professors have risen to the highest distinctions without substantial attainments. The public can judge of the abilities of a barrister, but their ignorance of the elements of physic utterly prevents them from forming any thing like a right estimate of the powers of a physician, as far as the exercise of his art is concerned. Dr. Johnson remarked, that the history of the means by which some physicians became extensively popular, would be extremely amusing; but it might be more truly said, that it would be a most lamentable exposure of the frailties of the human mind and heart, by showing that men had held responsible and even sacred situations, without the practical acquirements necessary for the discharge of those duties which relate to the lives of patients and the happiness of their friends, and which, indeed, in some cases, involve the very best interests of society; for example, where the health of public characters is at stake. It would be highly advantageous to the public, and likewise to the best part of the medical profession, if the elements of modern medicine were made a portion of the liberal education of every gentleman, for then medical men and medical measures would be under the wholesome control of public opinion, so that practitioners would be estimated by their merit, and some of our corporate institutions would undergo those salutary changes which are imperatively demanded by the increased intelligence of the age. If any thing requires to be narrowly watched, it is the corporate spirit which is so apt to make men, in pursuing their own advantages, lose sight of the general welfare. One cause of much of the evil existing in society, is the selfishness with which we attempt to compass our ends, not duly considering what we owe to the interests of others; and another cause of evil, is the indifference or indisposition to maintain those strict rules of justice, by which the rights of public institutions are upheld against the encroachments of sinister designs. What we want in medical legislation are, first, common rights to the members of the profession; and, secondly, security to the public, by a practical system of tuition, and by a practical mode of examination, divested of the mockery of a dead language as the medium of that examination. It is notorious that medical education at Oxford and Cambridge is little more than mere form in most essentials; and yet the graduate of those places has privileges in the London College of Physicians, which are denied to the graduate of Edinburgh, where the medical education is so incomparably superior, and thus an unwarrantable and invidious distinction has been introduced into a profession which, above all others, should be united in the bonds of brotherhood. Many disputes have taken place between individual members and corporations, but these have mostly been of a personal nature, and therefore have not interested the public much; but the question is of such vital importance in all its bearings, that the time is surely at hand when a rigorous inquiry will be instituted into the present state of our medical legislation, and when human health and human life will no longer be recklessly intrusted to collegiate formalities, but to an education strictly practical in all material points. To return, however, from this digression, let us suppose, that a man has obtained clear pathological principles, by the study of symptoms and dissections; even then he has to acquire, by assiduous observation, the most useful knowledge of all, namely, the precise application of the few remedies of known efficacy which are indicated. To arrive at this precision, it is requisite, first, to note accurately every circumstance of the case at the time the remedy is administered, and secondly, to note with like care every effect produced, that, by thus comparing the different results in different cases, we may be enabled to deduce general rules to guide us successfully

in practice; but in doing all this, we must be mindful to discriminate those particular circumstances which modify or change the direction of a general rule, as the mariner, in steering by the compass, marks the rocks and shoals on the chart, and shapes his course accordingly.

It may be gathered, then, from all that has been advanced, that anatomy, physiology, pathology, and therapeutics, cannot with safety be disunited in practice; and whether a man be called a physician, surgeon, or general practitioner, he should endeavour to be thoroughly well informed in each, in order to fit him for the due discharge of his professional duties. Celsus admirably remarks, that one man may excel in all departments of the medical art, and when they are divided, he is to be commended who knows the most. But though in practice they require to be all combined, yet there is great advantage in teaching and learning them separately, as far as lectures are concerned, for, divide and conquer, is a maxim quite as applicable to science as to war. The study of medicine is apt, at first sight, to appal the student, by the complexity and extent of its parts; but if each of these be distinctly presented by the teacher, and diligently attended to by the pupil, the difficulty soon gives way to the assurance of being able to master the whole subject.

Having premised these observations, it only remains for me to notice the plan to be pursued in this course of Lectures, which will be divided into three parts. In the first part, I shall give a series of Lectures, in which the general principles of the pathology and treatment of acute and chronic affections will be laid down, that the science may be, in the first instance, presented in as simple a view as possible. The second part will consist of a series of particular lectures on each of the acute and chronic affections, successively, of all the important parts of the body, with reference not only to the conditions of the various solid textures, such as mucous, serous, fibrous, and so forth, but also to those changes of the fluids, especially of the blood, which are so often connected with affections of the solids, and which have, unquestionably, been too much disregarded in modern pathology. The deranged states of the different textures will be illustrated by an extensive collection of preparations, so as to exhibit all that is at present known of morbid anatomy, which is inseparably connected with pathology; while the practice suitable to acute and chronic affections will be explained by a detail and generalisation of my own experience. In the third and last part, a series of commentaries will be given on Cullen's Nosology, that you may be able to form a correct opinion of the character of that work. It is still, in despite of all modern improvement, adopted as a test book in most of our schools and colleges; and, therefore, I consider it my duty to expose the numerous and dangerous fallacies which it contains. Though Cullen had the splendid example of Morgagni before him, yet he did not, like him, investigate and improve pathology by recording symptoms and making dissections; but he attempted to form a system principally from his own and the speculations of other men, as if the causes of natural phenomenon were ever discoverable by the mere force of imagination. It is not fitting in the present position of medical science, that such a system should be sanctioned, and this may be said without any disrepect to its author; for what may be considered as genius in one age, in the next may be far below the common standard of knowledge, from the accumulation of successive improvements. It shall be my aim to exhibit medicine, not as it was, complicated and obscured by the subtleties of the schools, but as it is, in a high state of advancement, made simple and clear by the agency of common sense.

It has been aptly said, that there are two kinds of education, one which we receive from others, and another which we communicate to ourselves. The age in which we live is remarkably distinguished for the last. Though in most of the scholastic institutions of long standing, memory is made the leading faculty in education, and the acquisition of the words of dead languages the main business of that education; yet the mind, obeying its natural bias, turns to the study of things, and taking a comprehensive range, observes, and thinks, and acts for itself. This is the cause of all modern improvements, and you must place yourselves completely under its influence. The scrutiny which I extend to the opinions and the practice of others, you must as freely and fearlessly extend towards mine. Indeed you must consider my Lectures only as materials for comparison, to be adopted as true, or rejected as erroneous, when tried by the test of your own observation. You have chosen a profession which involves your own character, the hopes of your friends, and the welfare of society; and by all these considerations you are bound to make it a personal study—you are bound to follow it, morally as well as medically, with a sincerity answerable to the tenderness of health, and the sacredness of life. Were it possible that any person came here with the intention of merely passing through the forms of tuition, that he might possess the name and the privileges of a practitioner; were it possible, I repeat, that such an individual could be

present, I would beseech him to change his plan of life, as he values his own peace of mind, and the well-being of others. But if medicine be a calling wholly unsuitable to the idle and ignorant, it is one which the industrious and intelligent student may ardently and advantageously prosecute. Rightly understood and applied, it is a profession which comprehends all that dignifies and adorns our intellectual and moral nature; it is a profession which is not limited in its operation to time or place, but extends its benefits to the whole of the human race; it is a profession which, approaching to the power and purity of mercy, blesses those who dispense, and those who receive, its influence; it is a profession in which all its members may be highly useful and respected, and some so distinguished, through the importance of their discoveries, as to be ranked among those great benefactors of mankind, whose memories will be revered by the wise and good of all succeeding generations.

FOREIGN DEPARTMENT.

Microscopic Researches on the Intimate Structure of the Organic Tissues of Animals. By Dr. Milne Edwards; continued from page 267.

Treviranus, regards all the organic tissues of animals as formed not only of globules, but also of elementary cylinders.* This opinion holds an intermediate place between the conclusions which may be drawn from the works of Fontana, and the results which I have derived from researches of the same kind. The observations which serve as the basis of these different opinions, do not imply any contradiction, as we shall soon see; but reasoning does not suffice to decide the point in dispute, and I often thought before proceeding farther, it was important to solve the question by means of experiment.

In examining with a microscope of Selligue's, the magnifying power of which is about 300, the nerves of a frog, properly dissected, that is to say, stripped of their fibro-cellular coat, plunged into water, and lacerated with the point of a needle, in order to give them the necessary degree of transparency, I did not at first see the cylindrical cavities, so well pointed out by MM. Prévost and Dumas; the internal structure of these fibrous bundles, appeared to me to be entirely globular; I soon found however, nervous fibrillæ, the transparency of which was such, that I could not recognise them from the elementary globules, of which my former researches had taught me the existence. Lastly, in some points where the laceration had been carried very far, I perceived some fibres, which, in some places, appeared to be formed only of globules, but which, in others, were perfectly transparent, and apparently of a homogeneous texture; the surrounding liquid enclosed, at the same time a considerable number of globules altogether similar to those of which the largest portion of the nervous substance appeared to be formed. The description of the internal structure of the nerves, given by Treviranus, accords very much with the result of this observation, for I distinctly saw the parts which this physiologist considers as elementary cylinders, and it was difficult to decide if the globules of which I have spoken only covered some portions of the surface of these cylinders, or whether these corpuscules completely formed them, as I had stated.

In a work on digestion, several results of which I communicated to the Philomatic Society, at its meeting on 3d March, 1825, I stated, that acetic acid exercises a very marked influence on the greater part of animal substances. In fact, this acid occasions almost always, the disaggregation of their composing globules, and transforms them into a mass, the aspect of which is similar to that of a jelly, and then, more or less, completely dissolves them. I thought, therefore, that on submitting the parts now under consideration to this agent, I might throw some light on the texture of the transparent cylinders which are perceived in the nervous substance; experiment fully confirmed this conjecture: scarcely had I mixed some drops of acetic acid with the water which soaked the small portion of nerve placed on the object-glass, than I saw the general transparence of the nervous body increase, the parts nearest the circumference became detached; and lastly, the greater number of the cylinders, in which I could not before perceive any trace of globular texture, showed in an evident manner the globules which composed them; not only the outline of these corpuscules became visible, but also they were disaggregated, and by degrees, the whole portion of the nerve submitted to the experiment was thus transformed into globules, a great number of which floated in the liquid, and the others were reunited in small transparent masses; these presented on their borders the appearance of a white jelly, diaphanous and intermixed with smaller globules.

* Sur les Elémens organiques du Corps animal; Journal complémentaire du Dict. des Sc. Med., tom. xxi, 1825.

It then appeared evident that the fibrillæ of the nerves, as I have before stated, are composed of elementary fibres, formed of globules reunited in a series of lines. This disposition is evident in the nerves of the larvæ; but, in vertebrated animals which have been dead some time, it is not very difficult to perceive the texture of these bundles of elementary fibres; for they become more transparent than in the ordinary state, and appear homogeneous. It is often the same when the portion of nerve submitted to the microscopic observation, has been kept too long plunged in water, or has experienced a slight desiccation. But in the nerves of an animal recently killed, the bundles of elementary fibres, show generally, in an evident manner, the series of globules which compose them, and in the contrary case, it is always easy to make the internal structure of that which is often taken for elementary cylinders apparent, by occasioning the disaggregation of their composing globules.

It is the same with muscular, cellular, and fibrous tissues, &c., which Treviranus regards also as composed of two organic elements, globules and cylinders; for these last are always formed of globules, which differ from the others only in their being united into a series of lines instead of being heaped together in a confused manner; in fact, by the action of potassium, acetic acid, and several other agents, we can, at will, determine the separation of these globules. We see, then, the organic elements of these different isolated tissues, and it is not difficult to assure oneself that they differ neither in their appearance nor their size from the globules of pus, and some of the animalculæ which show themselves in the infusions of animal and vegetable substances.

The means which I at first adopted to determine the relative size of the globules composing the tissues, have appeared to some persons not to be sufficiently correct to authorise the conclusions which I deduced from my observations; it was, however, employed in researches of the same kind by Captain Kater, as well as by MM. Prévost and Dumas, and which consists in making the image of the object perceived in the microscope correspond to the centre of the right eye, by the divisions of a rule fixed laterally to the level of the focus of the eye, and pierced by the left eye. These means would probably be insufficient for arriving at the exact knowledge of the real volume of the body which we have examined, but such was not my intention, for I only endeavoured to compare together the globules of the different tissues and liquids of the animal economy; lastly, to know if, by their physical characters, these corpuscules resemble each other or not.

MM. Prévost and Dumas estimated the diameter of the red globules of blood in a man to be $\frac{1}{125}$ of a millimeter, and that of the globules of pus and tissues to be $\frac{1}{210}$ of a millimeter. It appears to me to be very difficult to determine, with accuracy, the real size of these corpuscules; for by employing different means we obtain different results, which appear to depend generally on the size of the sheath which surrounds these small globules, and which is very considerable when it is placed near the solar microscope. Thus, with this instrument placed so as to magnify to about 540°, the diameter of the image of each of these elementary globules of tissues was about three millimeters, their *real* diameter being $\frac{1}{125}$ of a millimeter, whilst with the common microscope, and by placing a micrometer at the internal focus of the instrument, we have found them about $\frac{1}{210}$ of a millimeter, and on making the image coincide with the divisions of a rule placed by the side of the lens, these corpuscules did not appear to be more than $\frac{1}{210}$ of a millimeter. But this appears to me to be altogether of a secondary object, for the point of interest to the physiologist, is not to know whether the elementary globules of muscular tissue are $\frac{1}{125}$ or $\frac{1}{210}$ of a millimeter, but whether the diameter of these globules is always the same, either in the fleshy fibrillæ, or in the other tissues which contribute to form the body of the animals of the higher classes; and the similitude of the results which have been obtained in this respect, whatever mode be employed, as well as the comparison of the diameter of these corpuscules with that of the globules of the human blood, do not appear to me to leave any doubt on this subject.

In extending these researches to the small number of parts which now remain for us to study in the body of vertebrated animals, we perceive that their minute structure presents the same general characters as those of the tissues which we have just mentioned. I have observed with a microscope the synovial membranes, the cartilages, the transparent cornea, the different tunics of the eye, the crystalline lens,* the accidental membranes, the formation of which is caused by the inflammation of the pleura, &c. I have always seen them formed of globules similar to those which compose cellular, muscular, or nervous tissues, and also similar to those which we see floating in pus and the serum of the blood.

The minute structure of these different tissues in animals of the lower classes, pre-

* Leuwenhoeck had already indicated the globular structure of the crystalline.—Vide *Phil. Trans.* 1684, No. 165.

tents, in this respect, a no less remarkable uniformity; it appears that the size of their elementary globules might only present greater variations. Thus, in the nervous ganglia of the lobster, I have found globules having a diameter of $\frac{1}{250}$ of a millimeter, mixed with other corpusules similar in appearance, but of a much larger size. It might be possible, however, that these large globules are themselves formed of other globules analogous to those which we were before considering; and analogy also would tend to make us adopt this opinion. In fact, I have seen two globules of green matter join together, and soon unite in such a close manner, that it was impossible to know whether the corpuscle thus formed was not a single globule, if I had not assisted in its formation. The integuments of the fecula appeared, generally, quite homogeneous; but in such as had been dried and moistened several times in succession, I perceived the globular structure of these vesicles, a result which perfectly accords with the interesting observations of M. Raspail. Lastly, in the œsophageal ganglion of the snail, where the greater part of the globules of the medullary substance are of very great size, as M. Dutrochet very justly observed, the texture which I only suspected in the lobster, appeared to me evident; for I stated that these corpuscules were entirely formed of globules similar to those which we have several times before considered, a disposition which, moreover, is produced in several organs, and to which subject I propose, on some future occasion, to return.

The muscular, serous, and mucous tissues of the lobster, the snail, the maja, the oyster, the crustacea, &c., are commonly formed of globules, which do not appear to differ in any respect from those which constitute the same parts in the higher classes of animals. It is also the same with the thin sac which constitutes the hydatid; and lastly, in the bodies of the rotiferæ, and several other animalculæ, I have seen an analogous texture.

We find, then, that the minute structure of the different tissues which compose animals, every where presents analogous characters, and that the globular form is the one which the organic elements of these parts always assume. The most complex, as well as the most simple animal, is composed only of a greater or less number of these corpuscules, the chemical nature of which may differ, but in the form and size of which there is probably little difference. These globules, which may be called elementary, are perhaps formed, in their turn, of other smaller corpuscules, and which our means of investigation have not yet permitted us to perceive. It is on the manner in which these globules unite that the physical characters of the ultimate part which they constitute depend, and on their agglomeration in one direction more than another, that the form of the different organs and of the being which results from their assemblage is owing. It is thus with reason a celebrated naturalist has said, "that the form of the living body is more essential to it than its matter.

The disposition which these elementary globules assume, in the different tissues, can be reduced to four principal forms; in fact, they form at one time layers, or membranes, whose texture does not offer any thing fibrous; at another, fibres disposed with more or less regularity; at other times, vesicles or canals. The laminiform disposition is remarked, especially in cellular and serous tissues; the fibrillar, which only seems to be a modification of the first, becomes, by degrees, more apparent in the *fascia*, the aponeuroses, the muscles, and nerves. The elementary vesicles appear to form the parenchyma of the brain of some animals, perhaps of all, that of the liver, the pancreas, the salivary glands, &c. Lastly, the secreting canals exhibit them also in certain secreting organs, such as the kidney and testicles, as we shall see in another paper, where I propose to examine, in a particular manner, the structure of the globules.

The result of the researches which I have just stated, leads me naturally to examine if the globular form which the organic elements assume is possessed by the particles of matter assimilated to living beings, depending consequently on the influence of life, or whether, if certain substances present this appearance every time that they pass from the liquid to the solid state, the same as salts in crystallising acquire such or such determined form. A very remarkable experiment of MM. Prévost and Dumas, appears favourable to this last opinion. On making the electric pile act on liquid albumen, there formed at the positive pole of the pile, as every one knows, a whitish coagulum; with the assistance, however, of a microscope, these physiologists have recognised in this production very distinct globules, altogether similar to those of the bloods when they are discoloured, and to those of pus, milk, &c.; the same appearance, the same diameter, the same disposition to form rows or masses.

I stated, that similar phenomena took place at each time that the albumen coagulated, either by the effect of heat, or by the action of chemical reagents.

The serum of blood generally contains a considerable number of these albuminous globules; but, on evaporation, by the addition of some drops of hydrochloric or alcoholic acid, immense quantities form. It is the same, when by the action of these re-

agents, we cause the solidification of the vitreous humour of the eye; of the secreted mucous in such great abundance in snails; or, of that which surrounds the eyes of the frog.

Isinglass, which we regard as the purest gelatine, is formed of a great number of filaments of great thinness, the globular texture of which becomes manifest by the addition of a small quantity of acetic acid; but if after having dissolved this substance, we then produce the solidification, the elementary globules of which we have spoken show themselves again. Lastly, it is the same in the fibrine; for, if after having dissolved this product in potassium, for example, we neutralize the potassium, the globules of the fibrine soon form, and do not appear to differ in any respect from those which we separated from muscular tissue by mechanical means.

We see then, that the globular form of the organic elements of all parts of animals, is that which they always assume in passing to the solid state, thus forming the principal substances which are named the immediate productions of these beings; whatever may be the cause which determines this change of form, it appears to me that a knowledge of it will conduce to explain a great number of the phenomena of nutrition, to which I propose to return when I have completed this subject.

SKETCHES
OF THE
MEDICAL PROFESSION IN IRELAND.

No. XVIII.

Reduction of the Present Term of Medical Graduation in the University of Dublin considered.

"The progressive increase of the medical graduates at Edinburgh during the last fifty years, appears from the following table of the numbers who received the degree of M. D. during each successive period of five years, ending

Years	Graduates.
1781	128
1786	131
1791	151
1796	175
1801	233
1806	242
1811	258
1816	366
1821	534
1826	574
Total	2792

Of these 819 were Scottish, 706 English, 846 Irish, 225 from the British colonies, and 193 foreigners of all descriptions. A. Duncan, jun., Edinburgh Medical and Surgical Journal, 1827."

The article from which the preceding statement has been selected, teems with important intelligence to that part of the profession who take an interest in their own respectability, and the education of their future members. It may with confidence be considered a proclamation, embodying the opinions and intentions of the University of Edinburgh, on the much agitated questions of exacting higher qualifications in literature, philosophy, and professional science, from graduates in medicine and surgery. Lest the public might mistake it for the mere production of an individual, or the routine criticism of an editor, it is significantly endorsed with the signature of a gentleman uniting the several functions of librarian, registrar, and professor in his person, in that institution. In this official ultimatum, as it may be well called, it is asserted in very direct and dictatorial terms, that the Scotch school is determined to pursue that course through which it has arrived at its present boasted prosperity, and to oppose, by every means in its power, all the advances of suggested innovation. Throughout the long and elaborate reasoning by which this resolution is attempted to be justified, much disparagement of every other British college is mingled; and from the general tenor of the discourse, it might be inferred, that Æsculapius and his daughter Hygeia had really descended from the skies, and fixed their terrestrial residence in the capital of Scotland. With the arguments by which the writer endeavours to prove that a liberal education is unnecessary for students in medicine, I shall have nothing to do—that portion only of the document relating to Ireland shall claim my attention. The absurdity of his positions on the former topic, even if they had not been overturned a thousand times, might protect them from the respect of a refutation; but his taunts and misrepresentations of the state of medical affairs in Ireland, besides being as yet unnoticed by any other writer, furnish me with an appropriate opportunity of submitting a long-cherished proposition to the profession of that country. I have never indeed read an essay which so compendiously supplies all the requisites for enforcing the necessity of the objects contemplated in these papers—the correction of abuses in the professional establishments of Dublin, and the elevation of that city into a national school of medicine. To secure the latter object, the execution of the former duty seemed an indispensable step in the process; for, men must see their faults before

they correct them. However many may differ as to the manner in which that task was performed, none, at least, who read the arithmetical sarcasm on Irish institutions, quoted at the head of this paper, can deny the urgent provocation to severity of censure. On the present occasion, however, I should willingly exchange remonstrance for persuasion—steep my pen in the very "milk of human kindness," instead of dipping it in the "tincture of galls," if only one symptom of recovery from their apathy were discoverable in the patrons of these establishments. But it is not surely in the remarkable circumstance of such an insult as has been quoted, being three months in type without an answer from any Dublin practitioner, that we are to look for such a sight of returning regeneration. The instructed representative of a rival university sneers at the school of Dublin—talks of Irishmen being dependent on his college for degrees—totals up Irish students in his balance-sheet as if they formed part of his stock in trade—and vauntingly announces that they exceeded the number of Scotchmen who graduated at Edinburgh during the last fifty years, by a majority of twenty-seven! Eight hundred and forty-seven Scotch doctors imported into the country in half a century, and such an establishment as Trinity College in existence! If patriotism were other than a name, and public spirit not extinct in the Irish heart, it might be expected that such an announcement as this would inflame the cheeks of the profession of the country into one universal blush of shame, and smite their very hearts with penitent indignation. Though my hopes are faint that it will stir one muscle of their marble physiognomies; nay, though I am conscious it will be perused with cold-blooded indifference by some of the hereditary colonists of Ireland, who seem alike to delight in the degradation of the science and the liberties of their country; yet I have been induced to expose this merited taunt on their inactivity, with the expectation, that if it should not awaken a national impulse in their breast, it might stimulate them to exertion through the less honourable motives of avarice and self-interest.

> Nemo adeo ferus est, qui non mitescere possit,
> Si modo *pecuniæ* patientem accommodet aurem:

is an interpolation of the part which they will understand, and like the generals in the decline of the Greek and Roman empires, when glory had been sated and valour collapsed, I would point to the gold in the enemy's camp, and tell the medical veterans of Dublin who recline on their arms, there is your recompense, if you have only the courage to make it your own. But perhaps I err in thus preceding argument by passion, and defeat my own views by exciting the hostility of those whom I should rather conciliate. Be it so; though the Irishman whose feelings would wait to be roused by discussion on this subject, is not likely to be acted upon by any process of persuasion, nor deserves such a tribute of respect to his judgment. Enough, however, it is to be hoped, of nationality remains unextinguished in the country to sympathise with the sentiments expressed, and to merit the deference of an exposition of the subject; it is for such men that the following refutation of the statement alluded to is intended, and the proposal naturally rising out of it, depending.

The writer of these reflections on the School of Dublin, having condensed his misrepresentation into the manageable space of a paragraph, its dissection will occupy but little time. He commences his fulsome panegyric on the Scottish University, and implied censure on the Dublin College, in the following scrap of his domestic manufacture, political ecomomy. "There is no surer criterion of the value of any commodity than the demand for it, taken in connexion with its price." The application of the science of the counter to the affairs of a liberal profession, is at least characteristic of the Scotchman, and worthy of that cause which is attempted to be upheld by this profound apothegm of the shambles and the fish-market. The philosophy of profit, it would seem, has been so much the study of his life, that it is not at all surprising his first illustration should be drawn from his favourite study, and that his love of the "siller," should not only blind him to an error in his own standard, but to the absurdity of applying such a scale to matters, which bear no analogy to the concerns of the shop. For it so happens, that neither the demand, the price, nor both taken together, denote the value of any article, since there are many things which bring the highest prices of no value at all, while others of the greatest utility and demand, may be had free of cost; of the latter, the water with which the learned librarian removes the dust from his fingers, is a familiar instance; of the former, the port, with which it may be presumed he smothers the after-dinner aroma of his "kail and his haggis." Whether he means a high price or a low one, is not very evident from the context; but, as it shall be seen hereafter, such a disclosure would not have squared with his design. From this long since exploded clap-trap of the ecomomist, we are favoured with the following conclusion. "When estimated by this standard, we are led to this conclusion, that the degree of

M. D., got at Edinburgh, is more valued by the public, than the same degree when obtained at other Universities." Stop, Sawney, until we examine the legitimacy of the sequence of your commercial enthymeme. Is the public a judge of the value of medical degrees? of medical education? of what passes in the lecture rooms and examination halls of Universities? No, no; if the public was sufficiently enlightened on these subjects, he would scarcely have thus ventured to appeal to such a tribunal. But in confirmation of the public opinion, we are next favoured with the intelligence, that "Students from all parts of the British Empire come to present themselves as candidates for the highest honours of medicine, although these might be obtained elsewhere at a less cost of time and expense; because they themselves value it more, and they believe it to be more esteemed by the public."

In what universities, except those which no respectable practitioner would avow, a degree can be attained at less cost of time and expense than at Edinburgh, I am not aware. It cannot be in Oxford,—in Cambridge; certainly not in Dublin; where, therefore, this Eldorado of cheap degrees is to be found, I should like to be informed. Perhaps the universities of Aberdeen and St. Andrew's are understood; though the writer might not have wished to revive old recollections, by stating the names of these virtuous sisters, whose favours, until very lately, like the advice of a quack doctor, were to be obtained by remittance and the post. To the share of triumph which Edinburgh derives from a comparison with these institutions, he is perfectly welcome. "Very often," continues this candid reasoner, "the university of Edinburgh confers the degree of M. D. on gentlemen who have already obtained A. B. from Trinity College, Dublin, and who might ultimately obtain M. B. and M. D. in their original alma mater, *or, ad eundem*, in Cambridge or Oxford." It is truly a splendid feat, a fact worthy of an ostentatious gasconade, for the University of Edinburgh to confer medical degrees on Trinity College bachelors of arts. But does not Dr. Duncan know the cause of this dubbing of Irish students with Scotch titles? It is quite impossible for one holding a situation which makes him necessarily acquainted with the laws of every British College, to be ignorant on the subject; and the concealment of the real cause of such an anomaly is worthy of the sincerity evinced throughout the whole of his sophisticated statement. He must have been perfectly aware that the ordinary time, and consequently the expense, of obtaining an M. D., are thrice as great in the University of Dublin as in Edinburgh; and that this is the reason why students are obliged to emigrate to another college, where their objects are attainable on easier conditions. The acknowledgment, however, of this circumstance, would have exposed the folly of his comparison, as no inference of the estimation in which any two articles are held could be fairly drawn from the demand; one of which was accessible to the purchaser, the other placed out of his reach. Were Dr. Duncan's hands tied up for a year or so, he would no doubt consider it very unfair to estimate his professional skill at the end of that period, by the number of his prescriptions. Ridiculous as such a standard would be, hear how triumphantly he claps his wings, and crows out the concluding note of his eulogium on the University of Edinburgh. "This sufficiently proves that the degree of M. D. from Edinburgh is to some persons, and in some places, more valuable than the same degree from these other universities." If Dr. Duncan be ignorant of the causes which compel Irish students to resort to Edinburgh, of the estimation in which Scotch degrees are held in Ireland, and of the description of persons who frequent his school, he shall not be long so, as I shall take the trouble of giving him the necessary information on each of these topics.

There are two classes of students, differing very widely in their professional and literary education, who leave Ireland annually to graduate in Edinburgh. The first class consists of pupils who have graduated in arts, and intend to become members of the College of Physicians, and finally, Doctors of the University of Dublin; but who, wishing to anticipate the emoluments of their profession, put their half dozen of tickets in their pockets, cross the Channel, and immediately on their return commence practice, which they could not have done for many years had they waited the tardy arrival of a degree in their native University. To this respectable class of students also belong the pupils of the Royal College of Surgeons, who, for no other reason than to qualify them to meet physicians in consultation, and to evade certain restrictions imposed on them by that body, take out the necessary tickets during their surgical studies, and having taken "letters testimonial," as surgeons at home, pass over to Edinburgh, and return with a medical degree in their pocket, and their tongue in their cheek, at the absurdity of the College of Physicians. Not one of these students cares a straw for the value of Dr. Duncan's degree, further than it authorizes some of them to anticipate the slow process of making a doctor in their own University; and the others to act in the double capacity of surgeon and physician. So far from attaching any value to such a degree, there is

not one of these pupils who does not despise it, and laugh at the folly of the arrangements which compel them to acquire such a bauble. The second, and by far the more numerous class of pupils, is made up of aspiring apothecaries, and other victims of ambitious poverty, who, unable to meet the expense of a medical education in Dublin, and Mr. Colles's impost on pathology, embark in the desperate adventure of living on salt herrings, and taking a degree at Edinburgh. These are the heroic martyrs of abstinence and study, who swell up the Irish department in the album of Dr. Duncan's University, and intend to practise in the Irish villages, where "dead men tell no tales" of their academic proficiency in science. The time is not at all long past, when a group of these studious pilgrims might be seen on an October morning, taking their leave of the mountains in the north of Ireland, and bending their way to the port of Belfast, with their staffs in their hands, and their half-moon bannocks of oaten cake patriarchally slung in a wallet from their shoulders, to support the *vis vitæ* on their journey to their ancestral institutions in Scotland. Dr. Duncan has been told, that the cause of Irish students going to Edinburgh, is not a choice, but a necessity; he has been informed of the estimation in which these students hold a Scotch degree; it now only remains for him to see that the Irish public look upon such a degree at Zero. In the way of proof, it is quite enough to remark generally, that there is not a practitioner of any eminence in the capitol or the provinces, who is not a member of the College of Surgeons or Physicians in Ireland, and who does not practise under the sanction of these bodies; and, in short, that there is not a medical officer of any trust throughout the country, filled by an exclusive graduate of Edinburgh; not because there are laws to prevent their acceptance of such situations, but because an Irish grand jury would as soon commit a county infirmary to the care of one of their butlers, as to a mere Scotch diplomatist. Irishmen, therefore, go to Edinburgh, not because they respect its degree; not because they believe the public value it one straw; not because they imagine the teachers or the opportunities of learning are superior there to those at home; but because they find the time, the expense, and the qualifications less than in their native institutions, whose preposterous laws, unnecessarily prolonging the period of graduation, and multiplying expenses beyond the means of solvency, thus drive them into exile.

Under such circumstances, what should be the conduct of the physicians and surgeons in Dublin? They thus see their countrymen compelled to expatriate themselves; to abandon a capitol overflowing with all the materials of instruction; to relinquish all these advantages to which they were born with a natural right; they see, yes, eight hundred and forty-seven of them enrolled in the album of one school in half a century, without taking into account those who graduated elsewhere during that time; and is it too much to ask now, is this emigration to continue for ever—this exclusion from national education perpetual—these absurdities periodically to furnish every scribbler with an opportunity of stigmatizing the institutions of Ireland? Should not their desire to remove these evils distance deliberation—their acts anticipate the adoption of advice? Such, at least, would be the conduct of men who felt for their reputation, and wished to give their country the benefit of a respectable and scientific body of practitioners. The evidence supplied by Dr. Duncan's statement, proves that such a body of practitioners do not exist in the country, and that the present regulations of our three great medical establishments are inadequate to accomplish so desirable an object. Each of these establishments is in fault: the principal error, however, is to be found in the statutes of the University. But is the removal of this error practicable? and of what kind and to what extent should an alteration be made?

In offering a few remarks on each of these heads, I would wish that my anonymous insignificancy should be lost sight of in the importance of the subject, and that my views should be considered abstractedly from the authority of a name. I can discover no obstacle to the attainment of such a change in the statutes of Trinity College, as would remove the greater part of the evils pointed out, other than is to be found in the apathy of the profession itself. Such a change could be effected in the University, without forfeiting one acre of its princely domains; without expending one shilling of its accumulated wealth; without disturbing one of its present prerogatives; nay, such a change would even tend to increase still more its plethoric purse. The alteration, which would redound so much to its own credit, prosperity, and benefit to the country, is nothing more than the reduction of the present term of medical graduation into the more practical and useful period of four years. It would be merely to repeal a law which the improvement of the age has made obsolete, and the unsatisfied wants of the times have rendered oppressive. A law made in the reigns of Elizabeth or Charles, might be very well adapted to the exigencies of the day in which it was enacted, and become not only useless, but noxious in the progress of events. The expediency

which then prompted the enactment of this statute, now justifies its repeal; the power which legislated them still exists, and should, on the same principle, be exercised now. For us moderns not to be useful to ourselves, because our ancestors happened to make laws on certain matters, would be not only to act absurdly, but contrary to the example of those whose institutes we propose to venerate, since these legislators themselves of the olden time, must have innovated on some antecedent custom. Of the necessity and propriety of such an alteration, it would be superfluous to offer further proof; but how is such an alteration to be accomplished? I know not whether the Board of Trinity College is competent to such a measure without the intervention of the legislature; but were such a sanction required, the College might reckon with certainty on the efficient advocacy of their present and late representative. Though the approbation and concurrence of the Board should be first secured, it could not be expected that the project should originate with them. It ought, more properly, to emanate from the medical department of the establishment. Much reputation as Dr. Macartney has acquired by his professional exertions, I doubt much but it would be eclipsed by leading in this patriotic enterprise, for which his feelings and talents alike qualify him. Both he and his fellow Professors must have felt the anomaly with regret, of seeing their pupils obliged to graduate in a foreign institution. The teachers under whom pupils study, are surely the fittest persons to judge of their merits and to reward their toils. By the existing laws, this line of proceeding is entirely interrupted, the professor being deprived of the power of exercising a natural right, and the pupil of the pleasure and advantage of receiving the laurel from congenial hands. I believe I am insensibly adopting the language and sentiments of Mr. Carmichael on this subject; but I should not hesitate, even designedly, to echo the opinions of so enlightened an authority. The whole burthen, however, should not fall on the school of physic; a portion, and no small one, of the trouble, should be taken by the whole profession, both medical and surgical. Their knowledge of the defects of the present ordinances, and the respectability of their character, would ensure attention to any proposition which they might submit to the consideration of the Board of Trinity College or the legislature. There is no clashing of interests, that I know of, to prevent the co-operation of both professions in this national undertaking. "*Vis unita fortior*," the more engaged in it, the more certain the success. Let but a few of the influential members of both parties for a committee, hold a "consultation" on the subject, and they will soon find the smothered embers of national emotion revive around them in an irresistible flame. It is but too often the custom with many, to judge of the merits of a proposition by the chances of its adoption and success, to stigmatize every proposal as impracticable, even before an attempt has been made to carry it into execution. To such over-wise mortals, who mistake their own phlegm for the inspirations of prudence, and cautiously suspend their approbation until theory consolidates into events, I can only reply in the language of the poet:

——— Si quid novisti, rectius istis
Candidus imperti, si non his utere mecum.

ERINENSIS.

EDINBURGH GRINDERS AND EXAMINERS.

(*From a Correspondent.*)

THE classes are up, and the examinations go on briskly, so that there will be a plentiful crop of M. D.'s manufactured this season; one cause of which may be traced to the new regulations which will come into force next year, to the great annoyance of many, and to the exclusion of some. In London, I fancy, it is rather *infra dig.* to attend a grinder; but here things are different: out of a hundred students who are to be examined this summer, ninety-five are *grinding*. One class entering the grinder's room as the other is coming out.

I mentioned to you in my former letter, that I had passed my primum periculum, after a pretty sharp grind from the "Faculty," of two hours and a few minutes. Several have been already rejected, in the proportion of one to six or eight. C. was funking to an alarming degree until Monday last, when he went up, and returned swearing that they were the most gentlemenly men he ever was in the company of, "for (said he) they did not ask me about things I knew little of." After this examination, we get two "historiæ morborum," from different Professors, to treat, explain, and enlarge upon, to be written on certain paper given by the senate for the purpose, which must be returned in ten days; this part of the ceremony, however, is performed by the grinders for the fellows who will not brush up their latin. On the 12th of July, their cases are examined by the Professors who

proposed them, at the College; and in the mean time the thesis having been examined, which, as you know, is written by the grinder, *quasi* student, it is returned with the signature of the Professor who has read it, with the "perlegi." The thesis must then be printed on certain paper, with certain type, and by certain printers. On the 31st of July the first examination takes place, by each Professor calling those together whose theses he has examined, and makes each man answer, viva voce, for, the opinions advanced in his thesis, and not unfrequently a pile of d——d old worm-eaten folios are dragged forth, and the candidate, "ad summos honores," is desired to point out where Galen, Hippocrates, Aretæus, and Celsus, have expressed themselves in the way mentioned in the young gentleman's paper, to the no small discomfiture of those who never dreamt of looking into the original. On the following day, the dies solensis, old Principal Baird, in senate assembled, claps his hand on each pate, and says, "sit tibi laus," Scottice, "sit tibi *lousi*," and it is finished by his flinging off the hired gown, paying Wilson the Janitor your guinea, and pocketing your diploma; Sandey having taken care that you paid him your 23*l.* 13*s.* for the same, on the morning after the first examen, between the hours of nine and ten.

It is looked on as rather hard that *one* Professor has the power of *rejecting*, in the face of the other five, and young Duncan is said to have done this already this season: after the examination, if approved, the fellow is taken into the consultary room with "Inter nos te lubentissime recepimus."

One of the best pictures for Scotus, would be Monro coming into the class room twenty minutes after time, after three louds raps of impatience, with his loose pantaloons of thread-bare blue, drawn by some contrivance within Wellington boots; the third button hole of his coat fastened to the first button, et cæteris paribus, his knot of the three-day neckcloth hanging *gracefully* over his collar *behind*; his snub nose and little keen eye, on a head sunk between towering shoulders, and the "tout ensemble" as slovenly put together as need be.

Young Duncan continues his very scientific mode of examination; he asked a friend of ours yesterday how to *spay sows*, and which was the best way of *fattening geese*; perhaps the latter was on his own account, for you never saw such a pitiful personification of anxiety and leanness in any man's countenance; he looks for all the world as if he were in labour. He is a meddlesome stick.

THE LANCET.

London, Saturday, June 16, 1827.

We are happy in being able to inform our readers, that the Surgeons' Petition will be presented to the House of Commons on Monday next, by Mr. Warburton.

The fund for Mr. Cooke does not increase with the rapidity we could wish. Where are the subscriptions of the Lecturers? True it is that a *private* meeting of six or seven of them took place at the *Freemasons' Tavern* on Monday evening last, and we understand they came to the laudable conclusion of referring the matter to the consideration of the *Anatomical Society*. Why does not the College, on this occasion, disgorge a portion of its ill-gotten wealth? Surely its treasure could not be devoted to a more noble cause, than that of rescuing one of its members from undeserved ruin!

The undermentioned sums are deposited with Messrs. Goslings and Co., bankers, Fleet-street:—

SUBSCRIPTION

TO PAY THE FINE AND LAW EXPENSES OF MR. W. COOKE, OF EXETER.

	£	s.	d.
Subscriptions already announced	64	11	6
R. Cook, Esq., Gainsboro'	1	1	0
Mr. H. Ewen, do.....	0	10	0
W. W. Sleigh, Esq., Chapel-st., Grosvenor-square.....	1	1	0
W. Cutting, Esq., Hackstead, Ipswich.....	0	10	0
W. Eccles, Esq., 13, Warwick Court.....	1	1	0
E. J. Spry, Esq.	1	1	0
— Jones, Esq., 51, Strand....	1	1	0
— Inman, Esq. ditto	0	10	6
Per Dr. F. Fox, Derby.			
Dr. Forester, Derby.....	0	10	6
Dr. Bent, do.	0	10	6
Dr. F. Fox, Jun., do.	0	10	6
Mr. Godwin, do.	0	10	6
Mr. Wright, do.	0	10	6
Messrs. Haden and Son, do. ..	0	10	6
Mr. Douglas Fox, do.	0	10	6
Mr. Bennett, do.	0	2	6
Mr. Charles Borough, do.	0	5	0
Mr. Brown, do.....	0	10	6
Mr. Eaton, do.	0	5	0
Mr. Hobbes, do.	0	5	0
Mr. Penrice, do.	0	5	0

A NUMEROUS MEETING of the Governors of St. George's Hospital was held in that Institution on Friday week, when a committee, consisting of the following noblemen and gentlemen, was appointed for the purpose of investigating the charges advanced by Mr. Sleigh. Committee :—Lords Roseberry, Manners, Falmouth, Clarendon, Gwydyr, Brownlow, Robert Seymour, Talbot, Harborough. Hon. P. Bouverie, Hon. P. Hussey. W. Egerton, G. Cholmondeley, P. Pepys, Esqrs., and Drs. Gregory, Seymour, and Locock.

We consider it but fair to all parties, to abstain from comments until the publication of the REPORT. But we cannot avoid noticing, that something was said at the meeting respecting the sittings of this Committee being strictly *private*, and that Reporters would be excluded; should this be the case, we trust that Mr. Sleigh will have the good sense to decline answering a single question. If there be nothing wrong, why fear publicity?

The following tabular view of the comparative expenses of some of our hospitals has been extensively circulated amongst the Governors:—

A TABULAR VIEW of the COMPARATIVE EXPENSES and NUMBER of PATIENTS of St. George's, and other Hospitals, taken from their Annual Reports, published 1826.

Hospitals.	Number of Patients.	Total Expenses.	Drugs.
		£. s. d.	£. s. d.
St. George's	4,139	8,441 11 5	1,764 2 0
Middlesex	5,345	6,614 4 7*	668 18 7
Westminster	3,502	2,883 19 1	321 12 1
Fever Hospital	723	1,600 6 0½	111 19 5
Hull Hospital	1,205	1,294 3 11	126 15 9

* Deducting 947*l.* 6*s.* 5*d.* for legacy duty, cash, &c.

Remarks.—Although the Middlesex Hospital exceeds St. George's by upwards of a THOUSAND patients, yet St. George's exceeds it in expenses nearly TWO THOUSAND pounds annually.

St. George's exceeds the Westminster Hospital *only* by 637 patients; but in expenses by FIVE THOUSAND, FIVE HUNDRED AND FIFTY-SEVEN POUNDS, TWELVE SHILLINGS AND FOUR PENCE,

St. George's exceeds the London Fever Hospital in in-door patients, better than twice; but in expenses by SEVEN THOUSAND POUNDS A-YEAR! And it is worthy of remark, that the bill for drugs only, at St. George's (1764*l.* 2*s.*), exceeded *the whole expences* (1,600*l.*) of the Fever Hospital.

St. George's exceeds the Hull Hospital in number of patients three times, but in expenses SEVEN TIMES.

WE beg to point the attention of the reader to the correspondence between Mr. Mackelcan and Mr. Charles Bell, relative to the unjustifiable accusations against the former gentleman, contained in the last Number of the YELLOW JOURNAL. If Dr. Macleod be so ready in "bringing actions," he will probably find that others can direct a similar mode of warfare towards himself, and with far greater propriety.

Dr. Armstrong's Introductory Lecture to a course on *Morbid Anatomy* is an able performance, and exhibits views indicative of an original and vigorous mind. From its great length, we have been unable to insert any other lecture in our present Number.

Dr. Hassel tells Dr. Reece, that he intends to publish a small treatise on nervous diseases, in order to illustrate the peculiar tonic powers of the seeds of *hibiscus abelmeschus*, or musk-mallow, which probably deserve some notice. Dr. Reece calls these seeds "the most valuable nervous remedy that has been discovered." The tincture has been given in some cases of chorea, apparently with advantage.

A Syllabus of Surgical Lectures on the Nature and Treatment of Fractures, Diseases of the Joints, and Deformities of the Limbs and Spine; containing Descriptions of the Modes of applying Twelve New Apparatuses, illustrated by Twelve Plates; with Cases showing the advantages arising from the Plans of Treatment recommended by J. Amesbury, F.S.A., F.M.S., Surgeon to the South London Dispensary. 8vo. pp. 146. London, 1827. Underwoods.

In this work, Mr. Amesbury has differed somewhat from the usual practice of syllabus writers, by introducing descriptions of various mechanical contrivances for promoting the union of fractures, and details of cases in which his splints have been used with advantage. A work of this kind must needs be incongruous, being partly designed for the author's pupils, and partly for the profession generally; for the former cannot be much benefited by the cases, nor the latter by the syllabus. The description of the apparatus, and the modes of applying them may, however, be of use to both; and the work contains many useful practical directions, and ingenious devices, for the treatment of fractures.

Mr. T. L. Waterworth, of Newport, in the Isle of Wight, has written a pamphlet on the nature and properties of the aluminous chalybeate water which issues from a cliff on the S. S. W. coast of that island, below St. Catherine's sea mark, and between the villages of Niton and Chale. The romantic scenery of Shanklin and Niton, the undercliff to the East, the British channel to the South, the winding coast to the West, the Needles, St. Alban's Head, and the Isle of Portland, are cast around the health-giving spring, and, according to Mr. Waterworth, form a far-spreading and natural temple of Hygeia. The water was analysed by the late Dr. Marcet, who published an account of it in the first volume of the Geological Transactions, from which it appears that sixteen ounces of the water contain the following substances:—

Of carbonic acid gas, three-tenths of a cubic inch.

Sulphat of iron, in the state of crystallised green sulphat....	41	grs. 4
Sulphat of alumine, a quantity of which if brought to the state of crystallised alum, would amount to	31	6
Sulphat of lime, dried at 160°,,	10	1
Sulphat of magnesia crystallised	3	6
Sulphat of soda crystallised,...	16	0
Muriat of soda crystallised	4	0
Silica	0	7
	107	4

Among other complaints, agues, according to Mr. Waterworth, have yielded to the effects of the water.

MEDICAL SCHOOL OF GLASGOW.

Mr letter of the 14th ult. was not two days dispatched to you, when it was formally announced at head quarters that Dr. Charles Badham, of London, was appointed professor of the theory and practice of physic in this College. This gentleman seems to be wholly unknown to the medical and literary rulers of this western emporium of rum, cotton, and learning; but after some days investigation, it was ascertained that he was the author of a small duodecimo on Bronchitis, and, in this respect *alone*, entitled to assume a "vantage ground" over some who were inclined to call his pretensions in question, but whose lucubrations have been hitherto confined to their *portfolios*. From the current reports, it would appear that the appointment has not given the highest satisfaction to some of the parties more immediately interested, and it certainly has mortally offended the national pride of some, to find an Englishman nominated to a Scotch medical chair, when so many of their own countrymen were qualified and willing to accept of it. They seem to think that although his Grace of Montrose may be fond of *English physic*, he ought to have recollected that his northern friends are most effectually *operated on* by the national and indigenous productions of their own classic soil; and that, therefore, he was bound to have consulted his Scotch, and not his London physician, before such an important measure was agreed to. We are told that Sir Henry Halford has been the means of procuring this appointment for Dr. Badham, and this circumstance alone seems to excite the ire of some of the natives to a tolerable pitch of activity. Why, say they, should the acknowledged defender and supporter of English graduates, and of the useless obsolete and antiquated systems of medical education in Oxford and Cambridge, which are well-known to be at variance with the present liberal progress of the profession, be allowed to influence an appointment to a Scotch chair in medicine, whose graduates are by his assertion excluded from the "summi honores" of Metropolitan practice. I have only given you the above, as a specimen of the many disaffected stories which are now in circulation, and which party spleen and disappointment have engendered; they will soon however pass away and be forgotten, and are hardly worthy of the notice which has been bestowed on them. Of Dr. Badham, and his production, I am ignorant, but I hope he will enter on the duties of his new office with zeal and alacrity, and come here determined to exert himself in maintaining the fame of a rising University—to add to, and not to detract from, its celebrity. The Chair is one of great importance to a part of the medical school; and as, in consequence of the old age and disability of the late professor, its duties have been but imperfectly discharged for many years past, additional activity will be required to restore it to the popularity which nearly all the other medical classes enjoy. He may expect to meet with kindness and encouragement, if he proves an able and agreeable teacher; but he will also find that his first attempts will be rigidly scrutinised and commented upon; he will be, in fact, subject to an ordeal of no pleasant kind, but which may ultimately redound to his credit and advancement. In the University, botany is the only class connected with medicine, which is taught during the summer; and here there is nothing wanting to initiate the student into this most useful and enticing study; we have the benefit of an excellent botanic garden, and the instructions of Dr. Hooker, unquestionably one of the most eloquent and enthusiastic teachers of the present day. In him the manners of the gentleman and man of science are happily blended, and it is only matter of regret that so few of my fellow-students devote themselves under such an able teacher, to acquire a knowledge of such an agreeable and useful, though collateral, branch of the medical science. There are several private courses of lectures delivered, during the summer, on anatomy, surgery, practice of medicine, midwifery, medical jurisprudence, and diseases of the eye and ear; but I shall take a future opportunity of alluding to these under the head of the "Portland Street Medical School." I cannot, at the present time, however, allow myself to dismiss the affairs of this College, without expressing my regret that the doors of the Hunterian museum should be so completely and obstinately closed against the entrance of the students. It is peculiarly rich in morbid specimens of the human body, and was given by its noble founder, the late Dr. William Hunter, chiefly as an important and valuable adjunct to the medical school. Yet the many valuable lessons, which a careful study of its contents could not fail to produce, are unfortunately lost to the student, from the illiberality of its management. We are only permitted for *an hour in the year* (ex gratia) to perambulate its apartments, but not to handle or too minutely inspect any of the morbid preparations; and it is impossible for the most zealous student in this cursory manner, surrounded probably by 100 visitors, all anxious to glance over the curiosities which it contains, in the short period allotted to their visit, to obtain any satisfactory information. May I hope

that the day is not far distant, when this, and every other repository of a similar kind, shall be made extensively conducive to human improvement, by the freedom and liberality which they shall afford to the votaries of science, young as well as old, students as well as teachers, in mastering the difficulties and intricacies of their profession. I should recommend the medical students of Glasgow, at the commencement of next session, to come boldly and manfully forward, and by petition to the senate, or to some of the higher officers of the College, attempt to have this, and some of their other minor grievances, removed.

You are probably aware, that in this city there are two public bodies that grant surgical diplomas, viz., the Faculty of Physicians and Surgeons, and the College. The former was instituted 1599, and has since continued to grant licences, and as a body is respectable both for wealth and numbers. It has done nothing, however, in a public way to the improvement of the profession, and I think it reflects no credit on the Faculty, which has abundance of funds at command, that it has remained so long without a museum. The examinations are said to be strictly and impartially conducted, and we are told of several individuals having been rejected as unqualified, who had previously obtained a College licence of "Master in Surgery." The diplomas in surgery granted by the University pass under this title, and are only of recent origin. They were first given when the present regius Professor of Surgery was appointed to his chair, and then in consequence, it is said, of a clause in their old charter, which came in force only when anatomy and surgery were taught in the College by different individuals. The title is quite an anomaly in this country, and is bestowed on aspirants to surgical celebrity by no other University, and on this account I should be inclined to look upon it as an assumption on the part of the College, or at least of questionable validity, otherwise we might have expected the rest of the Scotch colleges, which possess charters nearly alike, to have enriched themselves by granting similar honours. It is a pity, however, that so much hostility and jealousy should exist between the University and Faculty of Physicians and Surgeons, who, instead of prosecuting each other's candidates, and calling in question their power to practise within a certain district of country, ought to unite in every liberal object which could enhance the respectability of their common profession.

There are two small hospitals in Glasgow for the reception of special cases, but from which the students at large derive little or no benefit, the Eye Infirmary and the Lock Hospital. The former has for its surgeons Dr. Monteath and Mr. Mackenzie, who attend alternately; and students, by paying a small fee, are admitted to their practice; few, however, seem here to bestow any attention on this important study. The Lock Hospital is attended by Dr. Cumin and Dr. Gibb, but from this Institution the students are altogether excluded. I think the want of attention which the students display for the important diseases treated in both these institutions, might be obviated, and a salutary influence excited by assigning separate wards for them in the Infirmary, instead of maintaining distinct establishments. In this way the different diseases would be daily brought in review before the student; he would be saved much time and expense, and be prepared, when embarking in active practice, to undertake their treatment with safety and success.

In my previous remarks on the medical officers of the Infirmary, I confined my attention to two of these gentlemen, Dr. Brown, and Dr. Macfarlane, because I had followed them as a pupil, and was better qualified to speak of their merits, but without having any invidious distinction in view. Dr. Balmanno is the junior physician, and has only officiated a few months, having been appointed on the retirement of Dr. Millar. He seems to be a shrewd active man, and to be possessed of a good deal of the dignity of the old school; but although I have been frequently in his wards, I consider myself not sufficiently qualified to pronounce an opinion on his practice. He acts also as physician to the Lunatic Asylum, which is considered one of the first Hospitals of the kind in Britain, but which I take shame to myself for not having yet visited. Dr. Anderson, one of the senior surgeons, is respected and esteemed by the students for his attention to their interests; he is a cool and cautious surgeon, and operates with much neatness. He performed two little operations very dexterously, the day previous to his resigning his patients to Dr. Young. The one was amputation of a great toe, with its metatarsal bone; the soft parts were so extensively diseased, that it became necessary to suppress the hæmorrhage by the actual cautery, it being impossible to secure the vessels by ligature. This case is doing well. The other was a man who had an opening in the ala nasi, which admitted the point of the finger; its edges were pared, and a portion of the adjacent cheek marked off and cut out to correspond; complete adhesion took place, and the patient has since been dismissed, with the deformity in a great measure removed. On the same day, Dr. Macfarlane amputated with coolness and dexterity, at the shoulder

joint for necrosis of the humerus. The disease was confined to the head of the bone, and its excision only was proposed; but the patient had changed his mind, and insisted when he came into the operation-room, to have the limb wholly removed. He was dismissed, cured, a few days ago. The present attending surgeons, are Dr. Young and Dr. Maclachlan; Dr. Young has, I understand, often acted as surgeon to the Hospital, as in fact is evident from the ease and rapidity with which he gets through his work. He is a bold and rather dashing surgeon, somewhat rough, but evidently a shrewd man. I have only seen him, as an operator, amputate a thigh and fore arm, and extirpate a mamma. He has but a few pupils following him, in consequence of daily calling a catalogue of their names, and refusing to grant them certificates unless their attendance is punctual; a plan which I humbly think deserves imitation. Dr. Maclachlan, the junior surgeon, has only been in attendance since the 1st of May, and it is obvious, from his attention to every little circumstance connected with his patients, that he has been trained in a military school. He is a sensible and judicious practitioner, and performed his maiden operation in the Hospital, on Sunday last, very respectably. It was a case of diseased tarsal and metatarsal bones, and he amputated below the knee. I have repeatedly and carefully of late, gone through the wards of the Hospital and examined the cases, but as I have met with nothing of very great interest or curiosity, I will not encroach on your valuable pages by entering into any further detail. Allow me to remark, however, that I, as well as many of my fellow students, have been often grievously incommoded during operations, by the crowded state of the area. Clerks, dressers, and visitors, by their eagerness to see what was going on, have often excluded those seated behind them from viewing the steps of important operations. This inconvenience, I hope the present surgeons will take care to have remedied; and if they would also condescend to be a little more communicative, at the bed side of their patients, when this can be safely and properly done, it would be acceptable to the younger students.

I am, Sir, &c.

GLASGUENSIS.

Glasgow,
6th June, 1827.

TO SIR ANTHONY CARLISLE.

SIR,—I shall not make you any apology, for considering you the author of a pamphlet on the same subject as that to which you allude in your letters in *The Times*. And as every person who volunteers his services for the benefit of the public, must be desirous of knowing how his labours are received, I take leave, as one of that public, to inform you, that, in my opinion, if any printed document ever deserved the contempt and detestation of a whole nation, yours, Sir Anthony, may safely be produced as a claim for the reward. An individual who attempts in any manner to loosen the bonds of society, by destroying the confidence that should subsist between man and man, may very easily secure to himself a notoriety that none but the worthless will envy. If, Sir, you really are the writer of that pamphlet, which this letter supposes you to be, by imputing the basest of motives to the actions of other men, do you not clearly demonstrate those by which your own has been regulated? For I consider that the motives of any man, or any set of men, cannot be judged of correctly, but by the consideration that the same motives would have influenced my own conduct under similar circumstances. I do not hold it to be impossible for a bad man to be incapable of performing a good action, nor for a good man not to commit a bad action, and I offer you the benefit of this doctrine; but a bad action, let the motive be what it may, should always be marked with the strongest censure, in order to deter others from following the example. As I have not the happiness to be associated with you at present, I shall not, since the promulgation of your opinions, be over solicitous to obtain the honour of your society; from the rank however which you hold in that society, and as "the generality of mankind are naturally weak and credulous," the influence of your opinions, if not properly scrutinised, might be greater than if you were plain Mr. Carlisle, and had not knelt for a knighthood.

Taking it, as you do, for granted, "That the preservation of moral purity in woman is intrinsically good; that it greatly contributes to their own happiness, and not less so to that of men," how does it happen, Sir Anthony, that those men who profess what you term the most noble of sciences, the surgical and medical, and who "are assimilated with the Creator more than any other men," should be the first, according to your account of the matter, to dishonour their Creator? And to be so forgetful of themselves, as to become the destroyers of their own happiness, by corrupting the purity of women?

Granting, too, that women were employed more generally than at present in the practice of midwifery, would it cease to be considered a branch of "those noble sciences," while the aid of a hospital surgeon is to be sometimes required? I shall not dwell on the absurdity of women being *exclusively* employed in the management of any business, the most difficult and important part of which is to be conducted by men of "enlarged intellect," who, in order to preserve the purity of women, must derive the knowledge required for that business by inspiration, or some such supernatural means; nor shall I point you out, Sir Anthony, as the brightest example of a hospital surgeon, if he is to be selected for his enlarged intellect. When the practice of midwifery was in the hands of females, they as well understood how to break the "intricate hinges of life and death," as any "grave disinterested physician, or experienced hospital surgeon."

But do you really believe, Sir, that the corruption of the manners of women is in any degree occasioned by the employment of men as midwives? You know that many other things in this luxurious age, tend to produce that effect, without the assistance of accoucheurs. And how the morals of our wives, widows, daughters, and nieces, are to be improved by following the business of midwifery, I am quite at a loss to conjecture.

I am equally at a loss to imagine, why it was necessary to go so far as China for an example of the delicacy of women. In the reign of Charles II. when it was predicted that the world (not the moral world, as in the present instance) was about to be destroyed, the Duchess of Portsmouth observed, "that she would go to China." If this matter were properly examined, I incline to think that China would not serve your turn, Sir Anthony, any more than it would that of the Duchess of Portsmouth. You are fond of reading, I am informed, especially before delivering a Hunterian oration, and you might have read that the Roman ladies, who, according to some of the Latin writers, were remarkable for the purity of their manners, did not employ men in the business of midwifery. And these ladies, too, had not the advantage of a modern education, printed books, nor a Carlisle to teach them how to *suppress* their passions. When you write again, Sir Anthony, I should advise you to make yourself acquainted with your subject —at least in theory; but do not be ambitious of obtaining the character of a moralist.

You may observe that, in this letter, I have attempted to show the weakness of your argument. In my future communications, should they become necessary, I will endeavour to prove the fallacy of your conclusions;—that it is the same reason which induces a good painter to paint portraits, that prompts a surgeon to undertake the business of midwifery. It is not for the gratification of lust, Sir Anthony; it is for bread:—it is for the bread which some hospital surgeons are endeavouring, by all means in their power, to monopolize and withhold. I remain, yours,

May 23, 1827. A CONSTANT READER.

P.S. As the pamphlet which I have attributed to you is anonymous, the author of this letter will remain unknown until that work is acknowledged, and not any longer.

MR. MACKELCAN'S REFUTATION OF THE CHARGES OF MR. SHAW.

To the Editor of THE LANCET.

SIR,—Mr. Shaw having thought fit to publish some gross misrepresentations respecting me in the Medical and Physical Journal of the present month, and having previously industriously circulated the same; I shall esteem it a favour if you will allow me, through the medium of THE LANCET, to put the profession in possession of the facts of the case, and of the correspondence which has taken place on this subject. What degree of credence may be attached to the assertions of Mr. Shaw, after the perusal of these documents, I shall leave others to determine.

I remain, Sir,
Your obedient servant,
JOHN MACKELCAN.

6, North-crescent, Bedford-square.
June 9th, 1827.

6, North Crescent, Bedford-square,
June 1st.

SIR,—I have been told that you have accused Mr. Wardrop and myself of most dishonourable and ungentlemanly conduct, in relation to a case which was under your care in the Middlesex Hospital a few months ago. You no doubt recollect that the patient I allude to died twenty-four hours after leaving the Hospital, and I understand you to have said, that you had obtained leave to examine the body, and had appointed an hour so to do; but that I in the mean time, without possessing any right to do so, went to the house, made the examination, took away the diseased parts, and told the friends that it was just the same to you as if you had done it yourself, as I would relate to you what I had found, and show you the preparation; that Mr. Wardrop had aided and abetted

me in this transaction, and that you termed me an "emissary" of his, I must request that you will, as soon as possible, address to me an answer, acknowledging or denying that you have made such a statement to any one.

I have the honour to be, Sir,
Your obedient servant,
JOHN MACKELCAN.

To JOHN SHAW, Esq.

In answer to this letter, the following was received from Mr. Bell:—

SIR,—Mr. Shaw is now confined with fever, and his friends cannot let him be disturbed with a correspondence of the nature you appear to desire.

I can so far answer your note as to say, that Mr. Shaw has not at any time joined your name with dishonourable and ungentlemanlike conduct.

I have, in common with Mr. Wardrop's best friends, very much regretted the course he has pursued; I have been sorry on his own account, and very much surprised that he should have attempted to injure Mr. Shaw.

Your statement in this letter, supposing that you made the dissection, implies nothing further than incivility to the surgeons of the Middlesex Hospital, inasmuch as the parts were not submitted to their inspection. This was unprofessional and improper, and if you did this, you have an apology to make to me, who, after attending the patient anxiously with Mr. Shaw, have not had an opportunity of seeing that our opinions were correctly formed.

If I offer you the opportunity of making an apology, it is for the reason, that having seen the ill consequences of unprofessional conduct, you may separate yourself from those who have been guilty of it.

I am, Sir,
Your very obedient
CHARLES BELL.

Soho Square, June 1.

To which letter I returned the following answer:—

SIR,—I have to acknowledge the receipt of your letter, which, I am sorry to observe, contains no satisfactory answer to the communication which I addressed to Mr. Shaw.

Inasmuch as Mr. Shaw *did* say to Dr. Tweedie, that I had made use of his name to obtain permission to examine the body, and that I had stated to the friends "that it would be the same as if he were present." I must consider that he has connected my name with that which, according to his own account, is "dishonourable and ungentlemanly conduct." But that my conduct on that occasion was neither dishonourable nor ungentlemanly, I have the authority of Mr. Shaw himself to declare; since in a conversation with him on this subject on the following day, he said that he had been positively refused permission to examine the body: that he had never met with such a set of beldames; that I *was exceedingly fortunate* to obtain permission, and that I *did* PERFECTLY RIGHT *in losing no time in making the examination.*

Since I addressed the letter to Mr. Shaw, I have seen the June Number of the Medical and Physical Journal, in which the very phrase made use of by Mr. Shaw to Dr. Tweedie, *(in connexion with my name,)* is repeated, namely, that "I had said it would be the same as if he were present;" and a few lines further on, that "men who had acted so unwarrantably in using my (Mr. S.'s) name," and so forth. How then, I ask you, Sir, as the friend of Mr. Shaw, can I accept of your assurance for him, that he has "never joined my name with dishonourable and ungentlemanly conduct?"

As the fact of my having examined the body, of my having taken the preparation to Mr. Clough, for whom I officiated, and of his having requested me to present it to Mr. Wardrop, is known to many of my professional friends; and as Mr. Shaw has thought fit to *publish* such unjust aspersions on me, I have no other course left but to protect myself *in the same way* from his injurious misrepresentations, and it will then be seen whose conduct has been most "unprofessional and improper."

However pacific the feeling which you have expressed may appear, in kindly affording me an opportunity of making you an apology, I beg leave to say, that I am not conscious of having done you or Mr. Shaw any wrong, and therefore have none to offer.

I am, Sir,
Your obedient servant,
JOHN MACKELCAN.

To C. BELL, Esq.

June 4th.

The annexed is a brief history of the case, as far as I am concerned:—

In the month of October, 1826, I was requested by Mr. Clough, of Norton-street, to see a patient of his, who was said to be suffering from rheumatism; I found the man complaining of severe pains in his arm and shoulder, and on being told that he had been recently exposed to wet, I concluded that he had rheumatism, and ordered some purgative and other medicines, of which the blue pill was a part. On my next visit I examined the patient more carefully, and ascertained that he had an aneurism of the root

of the subclavian artery, or of the innominata, and then informed him that it would be necessary for him to have an operation performed for its cure, and advised him to go into an hospital. At Mr. Clough's request, he went to the Middlesex, as that happened to be the nearest to his residence. As I felt much interested in the case, I requested permission from the house surgeon to be allowed to visit the patient, (not being a pupil of the Middlesex, I was not personally acquainted with Mr. Shaw,) and saw him generally every fourth or fifth day, in company with the house surgeon. I was in the habit of asking when Mr. Shaw intended to operate, as I wished to be present, and after the patient had been *three weeks* in the hospital, he informed me that Mr. Shaw had told him, that he could *cure him* WITHOUT AN OPERATION. Being convinced to the contrary, and the man having been sent to the hospital for the express purpose of having the operation performed, I told him, with the sanction of Mr. Clough, that whatever Mr. Shaw might say, he could never be cured without an operation, and that if he chose to leave the hospital, I would get him taken care of by another surgeon. No effectual measures had been taken for the man's relief. At the end of another week, Mr. Shaw introduced himself to me at the Westminster Medical Society, by saying that I had been pointed out to him, as the gentleman who had sent a case of aneurism to the hospital, and in the course of the conversation which ensued, I told Mr. Shaw, that it was my opinion, "that the patient might have a fair chance for his life if operated on; and that if he were not he must certainly die, and that shortly." To which Mr. Shaw replied, "*that he knew that very well, and only kept him in the hospital that he might have an opportunity of examining the body.*"

I still visited the man, and still urged him to leave, and he said he would do so, but from time to time was persuaded to remain in the hope of being benefited without any operation, till it was too late for any thing to save him; at last, feeling himself rapidly getting worse, and not liking the idea of being examined after death, he suddenly left the Hospital, but survived only twenty-four hours. During this time, however, I called at his house, not having seen him for ten days, and was requested immediately, by his wife, to take charge of him for Mr. Clough, as I had done before he left home. He lived only till the afternoon of that day, Dec. 5th. I applied the next morning for leave to examine the body, the man having been under my care, and I only having a right to do so, as acting for Mr. Clough. I was refused permission, as the widow told me it depended on a relation who was the deceased's executor, and not on herself, and that this relation would not allow it. On again going to this friend in the evening, I obtained his consent, went immediately to the house, and then found no objection on the part of the widow; I examined the body, took the diseased parts to Mr. Clough, who requested me to take them the next morning to Mr. Wardrop, being connected with a subject to which he had paid particular attention, and therefore more valuable to him than to any one else. The next day Mr. Shaw called, and Mr. Clough not being in the way he saw me; he was exceedingly *polite*, told me that "he had been *refused permission* to examine the body, that he had never met with such a set of beldames in his life, that I had been *very fortunate to obtain permission, and that I did* PERFECTLY RIGHT *in losing no time in making the examination.*" He asked to see the preparation; I told him that I had just taken it to Mr. Wardrop, and that he might see it at any time at Panton-square; at which he seemed very well pleased, and we parted, apparently on good terms. In the evening, Mr. Clough received a letter from Mr. Shaw, the substance of which was, that the preparation should be sent to the Middlesex Hospital, at twelve the next day. Mr. Clough was much surprised at this request, but wishing to act a friendly part, he desired me to call on Mr. Wardrop, and ask him if he would lend Mr. Shaw the preparation, which Mr. Wardrop declined doing, jocularly saying, "*Grand Anatomiste; grand Voleur.*" I heard nothing more of the matter, till Mr. Shaw thought fit to circulate and afterwards *publish* the report which I have felt myself called upon thus to refute.

I desired the widow to state the fact of her having given me leave to examine the body, and that I did not represent myself as officiating for Mr. Shaw; the following is a copy of her attestation:—

My late husband, Thomas Gordon, went into the Middlesex Hospital by the recommendation of Mr. Clough and Mr. Mackelcan, and left it from the great fear he had of dying in the Hospital. When he returned home, I requested Mr. Mackelcan to take charge of him again. After his death, I allowed Mr. Mackelcan to examine his body, he having also obtained leave from my deceased husband's executor, not for Mr. Shaw, but for himself and Mr. Clough. Mr. Mackelcan never used Mr. Shaw's name for any purpose.

SARAH GORDON.

Black Horse Yard,
June 12, 1827.

LONDON MECHANICS' INSTITUTION.

We announced in a former Number, that Dr. Birkbeck had commenced a course of Lectures on Anatomy to the members of this Institution. Six lectures have been already given; in the first four the bones were considered, in the last two the muscles. The descriptions of the particular bones were very concise, but the different articulations were minutely pointed out, and their motions illustrated by reference to subjects with which all present were familiar, and which could not fail to make an impression on those who heard them. For instance, the Lecturer compared the lower jaw to a sledge striking upwards against a suspended anvil (the upper jaw,) and the action to that of a lever of the third kind, the prop being at one end, the weight at the other, and the power applied between them. Again, the nature of the articulation between the occiput and atlas, and atlas and dentata, was ingeniously explained; the Lecturer also availed himself of the illustration employed by Paley in his Natural Theology, to show the two distinct motions permitted in these parts. The first, that of nodding between the head and first vertebra. The next that of rotation between the first and second vertebræ. This author says, "We see the same contrivance, and the same principle employed, in the frame or mounting of a telescope. It is occasionally requisite that the object end of the instrument be moved up and down, as well as horizontally or equatorially. For the vertical motion, there is a hinge upon which the telescope plays; for the horizontal or equatorial motion, an axis upon which the telescope and the hinge turn round together. And this is exactly the mechanism which is applied to the motion of the head." Dr. Birkbeck, however, showed the impropriety of Paley's comparison of the adaptation of the tooth-like process of the dentata into the atlas, with a tenon and mortice, observing, that had Paley worked at the bench, he would never have made so unmechanical a comparison. The Lecturer, in his description of the hip-joint, alluded to the very great difficulty with which the head of the thigh bone is removed from the acetabulum, after the ligaments have been divided; this, Dr. Birkbeck stated, was owing to the attraction of cohesion, which in this part of the body is very great; a circumstance that has been overlooked by most anatomists. The simple fact may be easily shown, by putting the flat surfaces of two bodies well lubricated in contact with each other, when it will be found that their separation cannot be easily effected. In speaking of the origin of the ligamentum teres, the lecturer gave it different from the mode in which it is usually said to arise; even Sir A. Cooper, in his work on Fractures and Dislocations, describes this ligament as arising from the upper and inner part of the acetabulum. Dr. Birkbeck, however, described it as being triangular, the base of which is bifurcated, and attached on each side of the notch at the lower and inner part of the acetabulum to the cotyloid ligament. In short, the bones, and particularly those parts relating to the mechanism of the joints, were well described, and the audience, which has been always crowded, appeared to take great interest in the whole of the lectures.

In the two last the muscles were described from the human subject. This was to us one of the most gratifying scenes we ever witnessed; the introduction of the human subject before so numerous and mixed an audience without the slightest mark of disapprobation, nay, with every appearance of satisfaction, is a striking proof of the good sense of the members of this institution. The benefit resulting from an exhibition of this nature, does not consist so much in the information communicated, as the feeling and taste which it engenders. Human dissection, which is so indispensably necessary to the successful cultivation of medical science, has received in this country such determined opposition, that until the public feel the importance of anatomy, and see with what little violation of feeling it may be cultivated, very few of the difficulties which now retard its prosecution will be removed. The profession, which from its superior knowledge of the value of anatomy, should have spared no exertions in attempting to remove the difficulties which impeded its cultivation, has remained, if not an indifferent, yet a silent observer of all, and takes no means to effect a change. The legislature has shown but little disposition to advance the study of anatomy, its great object having always been to pass enactments, only characterised by the severity of the punishment destined for those concerned in the exhumation of the dead. In this state of things, the only chance of amelioration which we possess, is by the diffusion of information among the public; by teaching them the value of dissections, and preparing their minds for the introduction of those measures, by which the difficulties attending the cultivation of anatomy in this country would soon be removed. To the mechanics of London much credit is due for the example they have set, an ex-

ample which ought to be followed by similar bodies throughout the country.

The muscles were well shown, and could be seen at a remote part of the theatre; the arrangement of the tendon of the hand and foot was very much admired, and the audience on both nights, appeared much entertained by the exhibition.

DR. BADHAM.

To the Editor of THE LANCET,

SIR,—In reply to your inquiries about Dr. Badham, and his competency to fill the chair in the University of Glasgow, to which he is, I believe, appointed, I have no hesitation in assuring you, that he is *highly* qualified for it; and I am much surprised that you should have been unable to procure any information respecting him.

Dr. Badham has published a most excellent Treatise on Bronchitis; is the author of a beautiful and correct translation of Juvenal, which may be classed with Pope's Homer, and Dryden's Virgil. He has lately also written a most classical little poem on Warwick Castle, and has evinced himself a scientific physician, an elegant scholar, and a man of very extensive literary attainments.

The University of Glasgow will in short have reason to be proud of its Professor.

I am, Sir,
Your most obedient,
J. C. B.

June 9, 1827.

We have the best authority for stating, that the information contained in this letter is correct.—*Ed. L.*

HOSPITAL REPORTS.

HOSPITAL OF SURGERY,

Panton Square, St. James's.

CONGENITAL DIVISION OF THE PALATE.

E. M., æt. 21. Her soft palate is divided vertically into two symmetrical portions, the cleft extends completely through the soft parts, but the bones are entire. The uvula is likewise split into two parts, which are situated on each side of the fauces The edges of the palate are separated from one another to a considerable distance, particularly in their posterior aspect.

The power of articulating the guttural sounds is almost entirely lost: she has however, command over those formed by the lips. During deglutition, fluids occasionally pass into the nares. The disease was congenital. It is remarkable that this girl, who is passionately fond of music, is able to sing with considerable execution.

Operation.

Mr. Wardrop, availing himself of Mr. Alcock's experience in this operation, requested his assistance. Three broad ligatures were first introduced through the soft palate, about a quarter of an inch from its edges, and at regular distances; this part of the operation was readily accomplished by means of Mott's needle. Mr. Alcock cut off the callous edges, with a pair of common curved eye scissors. The edges were then brought into contact, except at the upper portion of the cleft, where they could not be made to meet. A considerable degree of inflammation supervened, followed by bleeding from the edges of the wound, but no adhesion took place.

ABSCESS OF THE LIVER.

J. S., ætat. 57, residing at Harrow Weal, presented himself at the Hospital about six weeks ago, with a globular tumour, the size of the fœtal head, extending in the course of the linea alba, from the ensiform cartilage, nearly to the umbilicus. The swelling was soft and elastic, and afforded a distinct, though deeply seated sense of fluctuation. There was little pain on pressure, and the integuments were not discoloured. He experienced a constant uneasiness in the loins and right shoulder, with occasional rigors. His stools were white, and his skin and conjunctiva of a yellow tinge.

Six weeks after an attack of jaundice, followed by symptoms of acute inflammation of the liver, he noticed the swelling, which had rapidly increased. Mr. Wardrop stated, that he had no doubt the tumour was an abscess formed in, or connected with, the liver. In these affections, he observed, it is much better to avoid making any opening with the view of discharging the purulent matter, for he was sure he had seen many bad consequences arise from puncturing swellings of a similar nature. He accordingly directed the following treatment:—

℞ *Hydrarg. submur.* gr. i., to be taken every night; and,

℞ *Pil. rhei comp.* ii., every morning.

A few days ago, the man returned to show himself: his general health is greatly improved. The tumour has now nearly disappeared, and no sense of fluctuation can be perceived. He has observed nothing unusual in his stools, nor has he had any expectoration of consequence.

CURIOUS APPEARANCE OF A STUMP AFTER AMPUTATION.

A.B., ætat. 13, when two years of age, a carriage wheel passed over his arm, and inflicted so severe an injury, that amputation above the elbow joint became necessary. Dr. Thompson, who brought him to the Hospital, and performed the operation, stated, that the stump had been well covered, and soon healed. The boy went into the country shortly after the operation, and was lost sight of for many years. He returned a short time since. The stump is now of a very conical and tapering form, no muscular substance covers the bone within two inches and a half of its extremity. A portion of it, three quarters of an inch in length, projects completely beyond the skin. This has become coveted with a horny substance, of the shape of a thimble, and exactly resembling in structure the nail of the finger. The patient suffers no pain, but is obliged to keep the stump well covered, to defend it from injury.

Mr. Wardrop proposes to amputate a portion of the bone.

Appearances of the bone after Amputation.

Connected with this subject, are the following cases, which illustrate the changes which the extremity of the bone undergoes after amputation, taken from Mr. Wardrop's notes, who has the preparation of the latter case in his possession.

G. B., ætat. 50. Had his limb amputated for a caries of the tibia, a few inches above the knee joint. A month after the operation, when the stump was healed, he was attacked by an acute pulmonary complaint which carried him off. On examining the stump, the bone was found to have undergone considerable changes.

Around the whole circumference of the extremity of the femur, there was a mass of bone, having a very shapeless irregular form, and composed of a number of small cancelli, which adhered firmly to it, by the medium of the laminæ of the periosteum, but did not seem to be connected with the bone itself by any intertexture of osseous fibres. The whole circumference of the bone, to some distance round its extremity, was rough. In some places the acuteness of its edges was diminished, while on others, the bone was of a pale white colour, and had the appearance of exfoliation. The internal cancellated structure was filled with a bony deposit, differing in appearance from the cancelli themselves, but resembling that formed around the circumference.

D. M., ætat. 13. His arm was amputated for a scrofulous affection of the elbow joint; thirty-six days subsequently he died.

About an inch and a half of the humerus was sawed off from the end of the stump, and on examination, it was found to have some peculiarities, not observed in the former case.

Round the whole circumference of the cylinder, there was deposited a layer of osseous matter, about two or three lines in breadth, softer and more spongy than the original bone. On several parts of this new shell, there were other pieces of a very irregular shape, adhering to it, which seemed to have been formed at a later period. At the extremity there was a complete ring of the original bone, which had become loose, was of a pale colour, and apparently dead. It had lost all connexion by means of osseous fibres with the shaft of the bone, and was retained in its situation merely by the surrounding fungus. Opposite to the ring, in the centre of the stump, there was a circumscribed roundish fungous mass, which adhered to the living bone by a narrow neck. After being macerated, this fungus was found to be formed chiefly of a mass of osseous matter, soft and spongy, and covered with granulations. It had no intertexture of fibres with the other bony matter.

Mr. Bell performed the palliative operation for hydrocele, in a case unattended with any circumstances deserving particular notice.

Mr. Duncan operated on a case of staphyloma, and excised a small tumour growing from the mucous membrane lining the cheek, with a dexterity peculiar to himself.

WORKS RECEIVED FOR REVIEW.

Cases of the Excision of Carious Joints. By PHILIP CRAMPTON, F.R.S., Surgeon General to the Forces in Ireland, and Surgeon in Ordinary to the King. From the Dublin Hospital Reports. Dublin; R. Graisberry, 1827. 8vo. pp. 560, with plates.

An Essay on Gout, in which its actual Predisponent, Proximate, and Exciting Causes are clearly defined, and its preventive and curative indications fully demonstrated, upon new pathological principles: to which are added, Observations on the Modus Operandi of Bath Waters in Gouty Habits. By P. P. P. MIDDLETON, M.D. &c. Author of a Treatise on the Diagnosis and Prognosis of Diseases; Clinical Reports of Select Medical Cases, and a New System of Pulmonary Pathology. Fourth Edition. Bath, Geo. Wood; and London, Baldwin and Co. 1827; 8vo. pp. 97.

Internal Evidences of Christianity deduced from Phrenology. By MEDICUS, Member of the Edinburgh Phrenological Society. Edinburgh, John Anderson, jun., and Longman and Co. London, 1827; 12mo. pp. 138.

Medical Botany, or Illustrations and Descriptions of the Medicinal Plants of the London, Edinburgh, and Dublin Pharmacopœias, with those lately introduced into Medical Practice. By JOHN STEPHENSON, M.D., and JAMES MORSS CHURCHILL, F.L.S. &c. No 6, June 1, 1827. Churchill, Leicester-square.

The authors of this work appear to have spared neither pains nor expense in redeeming the promise with which they set out; and are producing what was very much wanted, a very useful, elegant, and cheap medical botany.

A Case Book, for Registering Cases and Occurrences that may be considered important in Medical and Surgical Practice. Jackson, Borough.

A few remarks as a guide for taking cases are prefixed to the book, which is neatly ruled, and furnished with an index, and seems to be well calculated for the purpose of registering cases.

Observations sur la Nature et le Traitement de l'Epilepsie. Par M. le Baron PORTAL, Premier Medecin du Roi. 1827. A Paris, chez J. B. Bailliere, Libraire Editeur Rue de l'Ecole de Medicine; et Londres, meme Maison, 3, Bedford-street, Bedford-square. 8vo. pp. 472, prix 8s.

Nouveaux Elémens d'Hygiène redigés suivant les principes de la nouvelle doctrine medicale. Par CHARLES LONDE; Tomes Premier et Second, prix 12s. A Paris, chez J. B. Bailliere; a Londres, meme Maison. 1827.

Exposé des Divers Procédés employés jusqu'a ce jour pour guerir de la Pierre, sans avoir recours a l'Operation de la Taille. Par J. LEROY (d'étoille) Docteur en Medicine. A Paris, chez J. B. Bailliere, 1825, pp. 232.

Annali Universali di Medicina compilati dal Signor Dottore Annibale Omodei. Vol. XLI. Gennajo, Febbrajo, e Marzo, Milano. 1827.

TO CORRESPONDENTS.

COMMUNICATIONS have been received from Mr. KINGSLEY of Roscrea, Ireland—Mr. JENNINGS of Tamworth—Mr. R. VINES—Mr. IRWIN GANLEY—Mr. W. THEAKSTONE—Mr. W. SIMPSON—Mr. W. CUTTING—Dr. MARCHANT—Mr. MORGAN—A. H.—MEDICUS—MEDICUS BRIGHTONENSIS—JUVENIS—CHRONONHOTONTHOLOGUS—AN ANTI-MONOPOLIST—AMICUS JUSTITIÆ—A BAT CATCHER—A LATE PUPIL—PAUL PRY—W.—A STUDENT—A CI-DEVANT DRESSER—AN ENEMY TO OPPRESSION—all of which shall receive the earliest attention that can be given them; but from the great pressure of matter on hand, we are under the necessity of craving a longer indulgence than we are wont to do.

ERRATA.

In the description of Dr. Penneck's catheter, page 189, column 1, line 38, for "ball," read *bulb*.

Column 2, line 31, for "cutting," read *butting*.

Page 190, col. 2, line 44, for "1827," read 1826.